Deutsche Lufthansa AG

2024 CDP Corporate Questionnaire 2024

Word version

Important: this export excludes unanswered questions
This document is an export of your organization's CDP questionnaire response. It contains all data points for questions that are answered or in progress. There may be questions or data points that you have been requested to provide, which are missing from this document because they are currently unanswered. Please note that it is your responsibility to verify that your questionnaire response is complete prior to submission. CDP will not be liable for any failure to do so.
Terms of disclosure for corporate questionnaire 2024 - CDP

10/15/2024, 03:39 pm

Contents

C1. Introduction

(1.3) Provide an overview and introduction to your organization.

(1.3.2) Organization type

☑ Publicly traded organization

(1.3.3) Description of organization

The Lufthansa Group, headed by Deutsche Lufthansa AG, is an aviation group with operations worldwide. It plays a leading role in its European home market. With 96,677 employees, the Lufthansa Group generated revenue of EUR 35,442m in the financial year 2023. The Lufthansa Group comprises the Passenger Airlines and Aviation Services segments. At the end of 2023, the Lufthansa Group fleet comprised 721 aircraft (previous year: 710 aircraft). The Passenger Airlines segment includes, on the one hand, the network airlines Lufthansa Airlines, SWISS, Austrian Airlines and Brussels Airlines. As part of the multi-hub strategy, they offer their passengers a broad range of flights from their global hubs in Frankfurt, Munich and Zurich as well as their national hubs in Vienna and Brussels. Lufthansa Airlines also has close relationships with the regional airlines Lufthansa CityLine, Lufthansa City Airlines and Air Dolomiti as well as Discover Airlines, the Lufthansa Group's holiday airline. Edelweiss, the leading Swiss holiday airline, is a sister company of SWISS. Furthermore, Eurowings also belongs to the Passenger Airlines segment. This airline provides a comprehensive range of direct connections for European short- and medium-haul destinations, in particular from German-speaking countries. Aviation Services comprises the segments Logistics and MRO, as well as Additional Businesses, which in particular include Lufthansa Aviation Training and Lufthansa Systems. An agreement to sell AirPlus was signed in 2023. The Group Functions are also part of this segment. The former Catering segment was dissolved at the close of the financial year 2023 following the sale of the LSG group to Aurelius. Deutsche Lufthansa AG has the management and supervisory structures typical for companies in Germany. The Executive Board is responsible for managing the Company and defining its strategic direction. In doing so, the aim is to increase company value sustainably. The Supervisory Board appoints, advises and supervises the Executive Board. The business segments and the airlines are each under their own management. Overall coordination is by means of the Executive Board of the LHG and the Group Executive Committee, which consists of the members of the Executive Board of the LHG and the CEOs of the main companies. The Supervisory Board of Deutsche Lufthansa AG consists of 20 members - 10 shareholder representatives and 10 employee representatives. In its role among the largest airlines in the world, the LHG aims to continue to play a part in actively shaping the global airline market. It strives to follow the mission statement: the LHG connects people, cultures and economies in a sustainable way. In doing so, it aspires to set standards in terms of sustainability and customer-friendliness. It uses the potential of innovation and digitalisation to develop customer-focused products and increase efficiency. Corporate responsibility and identity are put into practice locally and supported by overarching functional processes that enable synergies and economies of scale. A strict focus on costs, operational stability and reliability in all areas are firmly established in the DNA of the LHG. The safety of flight operations is and will always be the top priority.

(1.4) State the end date of the year for which you are reporting data. For emissions data, indicate whether you will be providing emissions data for past reporting years.

End date of reporting year

12/31/2023

Alignment of this reporting period with your financial reporting period

☑ Yes

Indicate if you are providing emissions data for past reporting years

☑ Yes

Number of past reporting years you will be providing Scope 1 emissions data for

☑ 2 years

Number of past reporting years you will be providing Scope 2 emissions data for

☑ 2 years

Number of past reporting years you will be providing Scope 3 emissions data for

☑ 2 years

(1.5) Provide details on your reporting boundary.

	Is your reporting boundary for your CDP disclosure the same as that used in your financial statements?
	☑ Yes

(1.6) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

ISIN code - equity

Does your organization use this unique identifier?

☑ Yes

Provide your unique identifier

DE0008232125

D-U-N-S number

Does your organization use this unique identifier?

☑ Yes

Provide your unique identifier

315000893

(1.24) Has your organization mapped its value chain?

Value chain mapped

☑ Yes, we have mapped or are currently in the process of mapping our value chain

Value chain stages covered in mapping

☑ Upstream value chain

Highest supplier tier mapped

☑ Tier 1 suppliers

Highest supplier tier known but not mapped

☑ Tier 2 suppliers

Description of mapping process and coverage

To enable an appropriate and effective mapping (risk management system) for the centrally managed suppliers the Lufthansa Group uses an IT application which is designed to make it possible to identify potential human rights- and environment-related risks and violations. The approach is consistent with the requirements of the German Corporate Due Diligence in Supply Chains Act. Country risks are determined on the basis of different publicly accessible indices and divided into risk categories. These indices address – as far as can be seen from the indices – the human rights and environmental risks mentioned in the German Duty of Care Law (LkSG). To determine commodity risks, suppliers are classified into industries (ISIC standard) and commodity groups. The IT application carries out a risk assessment based on suitable indices. The calculation of country and commodity risks results in an abstract risk. In addition, an AI-supported web screening is carried out for suppliers who have a certain risk score in the risk management system. This involves checking social media and news to see whether and what reports there are about the individual suppliers. Further information such as self-disclosures, known negative human rights or environmental incidents and LHG spend versus supplier revenue influence the mapping (360 degree risk score) of the suppliers. 100% of centrally managed direct suppliers has been mapped.

(1.24.1) Have you mapped where in your direct operations or elsewhere in your value chain plastics are produced, commercialized, used, and/or disposed of?

	Plastics mapping	Primary reason for not mapping plastics in your value chain
	☑ No, and we do not plan to within the next two years	☑ Lack of internal resources, capabilities, or expertise (e.g., due to organization size)

C2. Identification, assessment, and management of dependencies, impacts, risks, and opportunities

(2.1) How does your organization define short-, medium-, and long-term time horizons in relation to the identification, assessment, and management of your environmental dependencies, impacts, risks, and opportunities?

Short-term

From (years)

0

To (years)

1

How this time horizon is linked to strategic and/or financial planning

The short-term time horizon for climate related risks is aligned with the financial time horizons.

Medium-term

(From (years)

2

To (years)

4

How this time horizon is linked to strategic and/or financial planning

The medium-term time horizon for climate related risks is aligned with the financial time horizons.

Long-term

From (years)

5

Is your long-term time horizon open ended?

☑ Yes

How this time horizon is linked to strategic and/or financial planning

The long-term time is beyond the financial time horizons. From a strategic perspective, we also assess the potential climate risks and opportunities identified from the climate scenario analyses carried out, which arise in the long term for the period up to 2050.

(2.2) Does your organization have a process for identifying, assessing, and managing environmental dependencies and/or impacts?

Process in place

☑ Yes

Dependencies and/or impacts evaluated in this process

☑ Impacts only

Primary reason for not evaluating dependencies and/or impacts

☑ No standardized procedure

Explain why you do not evaluate dependencies and/or impacts and describe any plans to do so in the future

As there currently is no established process for identification of dependencies we are not able to evaluate dependencies. But we intend to set up a process for identifying and evaluating dependencies within the next two years. Due to the upcoming obligation to report according to the CSRD, we are in the course of defining new processes for fullfilling the CSRD requirements including (D)IRO-management.

(2.2.1) Does your organization have a process for identifying, assessing, and managing environmental risks and/or opportunities?

Process in place

☑ Yes

Risks and/or opportunities evaluated in this process

☑ Both risks and opportunities

Is this process informed by the dependencies and/or impacts process?

☑ No

Explain why you do not have a process for evaluating both risks and opportunities that is informed by a dependencies and/or impacts process

The process for identifying and assessing "dependencies and/or impacts" was set up in 2023. In the reporting year the link to the process for evaluating both risks and opportunities was not implemented yet, but we plan to within the next two years.

(2.2.2) Provide details of your organization’s process for identifying, assessing, and managing environmental dependencies, impacts, risks, and/or opportunities.

Row 1

Environmental issue

☑ Climate change

Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

☑ Risks
☑ Opportunities

Value chain stages covered

☑ Direct operations
☑ Upstream value chain
☑ Downstream value chain

Coverage

☑ Full

Supplier tiers covered

☑ Tier 1 suppliers

Type of assessment

☑ Qualitative and quantitative

Frequency of assessment

☑ More than once a year

Time horizons covered

☑ Short-term
☑ Medium-term
☑ Long-term

Integration of risk management process

☑ Integrated into multi-disciplinary organization-wide risk management process

Location-specificity used

☑ Site-specific
☑ Not location specific

Tools and methods used

Enterprise Risk Management
☑ Enterprise Risk Management
☑ Internal company methods

International methodologies and standards
☑ IPCC Climate Change Projections

Other
☑ Materiality assessment
☑ Partner and stakeholder consultation/analysis
☑ Scenario analysis

Risk types and criteria considered

Acute physical

☑ Drought
☑ Tornado
☑ Landslide
☑ Wildfires
☑ Heat waves
☑ Cold wave/frost
☑ Cyclones, hurricanes, typhoons
☑ Heavy precipitation (rain, hail, snow/ice)
☑ Flood (coastal, fluvial, pluvial, ground water)
☑ Storm (including blizzards, dust, and sandstorms)

Chronic physical

☑ Heat stress
☑ Water stress
☑ Sea level rise
☑ Coastal erosion
☑ Changing wind patterns
☑ Temperature variability
☑ Increased severity of extreme weather events

Policy

☑ Carbon pricing mechanisms
☑ Changes to international law and bilateral agreements
☑ Changes to national legislation

Market

☑ Availability and/or increased cost of certified sustainable material
☑ Availability and/or increased cost of raw materials
☑ Changing customer behavior

Reputation

☑ Increased partner and stakeholder concern and partner and stakeholder negative feedback
☑ Negative press coverage related to support of projects or activities with negative impacts on the environment (e.g. GHG emissions, deforestation & conversion, water stress)
☑ Stigmatization of sector

Technology

☑ Transition to lower emissions technology and products

Liability

☑ Exposure to litigation

☑ Non-compliance with regulations

Partners and stakeholders considered

☑ NGOs

☑ Customers

☑ Employees

☑ Investors

☑ Suppliers

☑ Regulators

☑ Other, please specify: Contracting partners, Science and research, residents, vulnerable groups

Has this process changed since the previous reporting year?

☑ No

Further details of process

LHG's Risk Management (RM) aims to identify, assess, and manage material risks, including climate-related ones, within a company-wide process. Risk owners must monitor and integrate these risks into planning and control processes, following standards set by the Executive Board. Regular climate scenario analyses by an interdisciplinary team and external experts help identify potential opportunities and risks due to climate change. Feasibility and cost/benefit analyses are conducted for any identified opportunities using internal evaluation methods. Identification: LHGs IT-supported Enterprise RM process identifies current and potential risks from internal and external sources at both Group level and larger Business Units and documenting them in a comprehensive risk portfolio. Risks are defined as possible deviations from a forecast or objective. The identification of risks is a continuous task due to the dynamic risk landscape. Assessment: Risk assessment involves plausibility checks and evaluating financial or strategic impacts, distinguishing between qualitative risks (mostly long-term developments with potential adverse consequences, such as chronic physical climate risks) and quantitative risks (those with estimable impacts on earnings). Risks are categorized into different classes based on their materiality. Risk owners must verify quarterly that the risks for which they are responsible are complete and up to date. Regular reporting and consultation with LHG committees are part of the assessment process. Process for responding to climate-related risks: Risk owners actively manage risks through mitigation instruments and measures. The Executive Board is regularly informed about LHG's risk situation and reports annually to the Audit Committee on the RM system's performance. New Top risks in the highest category trigger mandatory ad hoc reporting. Managers with budgetary or disciplinary responsibility are

designated as risk owners, responsible for implementing risk management in their areas. The Supervisory Board's Audit Committee monitors the effectiveness of LHG's RM, while the RM Committee ensures early identification, evaluation, and management of business risks, enhancing the efficiency of RM. Case Study: To identify and assess the potential impact of climate-related physical and transition risks and opportunities, LHG conducts climate scenario analyses (most recently in 2023/2024). These analyses inform risk and opportunity assessments and improve understanding of LHG's business resilience. LHGs latest scenario analysis results indicate that carbon and SAF/fuel price developments are significant cost drivers with high-risk potential in the short to long term. LHG's current strategy already reflects many findings from these analyses, as climate-related issues influence its products, services, value chain, research and development investments, and operations. The results confirm that LHG's strategic initiatives are effective in minimizing transition risks and capitalizing on climate opportunities. Regarding physical climate risks, the analysis shows these risks will have selective and long-term impacts (2040/2050) on LHG's business. To better quantify these effects and enhance resilience, LHG plans to supplement qualitative scenario analysis with a quantitative assessment of material climate risks.

Row 2

Environmental issue

☑ Climate change

Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

☑ Impacts

Value chain stages covered

☑ Direct operations
☑ Upstream value chain
☑ Downstream value chain

Coverage

☑ Full

Supplier tiers covered

☑ Tier 1 suppliers

Type of assessment

☑ Qualitative only

Frequency of assessment

☑ Annually

Time horizons covered

☑ Short-term
☑ Medium-term
☑ Long-term

Location-specificity used

☑ Not location specific

Tools and methods used

Other

☑ Materiality assessment
☑ Other, please specify: Double Materiality assessment

Partners and stakeholders considered

☑ NGOs
☑ Customers
☑ Employees
☑ Investors
☑ Suppliers
☑ Regulators
☑ Other, please specify: Contracting partners, Science and research, residents, vulnerable groups

Has this process changed since the previous reporting year?

☑ Yes

Further details of process

In the course of fulfilling the requirements resulting from the CSRD, the LHG introduced a process in 2023 which, in addition to the existing risk and opportunity management, will in future also regular identify, assess and manage the company's material impacts on the ESG aspects defined in the European Sustainability Reporting Standards (ESRS). The identification of impacts was carried out in 2023 on the basis of a clustering according to the various business areas of LHG, the activities, the various areas/regions in which LHG is active, the stakeholders and the value chains (up- downstream, own operations) and documented in an Impact Risks & Opportunities (IRO) inventory. Various sources/expert opinions were consulted for this purpose, e.g. the results of a stakeholder survey conducted in 2023 and a climate scenario analysis, industry studies, research work, database material and external and internal resources. An IRO nomenclature – according to the CSRD/ESRS – would be used to classify the impacts in positive and negative impacts. This IRO inventory (longlist) of the LHGs potential and actual impacts on third parties then served as the basis for carrying out the assessment / materiality analysis in accordance with the CSRD. Assessment and validation: Assessing the impact comprises a multi-step process. Impacts are assessed in terms of time horizon, severity of impact and, in case of potential impacts, the likelihood of occurrence. Both actual and potential impacts must be accounted for. The time horizon will be selected first for the then to-be-performed assessment: Short-term (1y); Medium-term (1-4y); Long-term (4y). Then, the severity will be assessed and this assessment is performed on a scale for each assessment category. Lastly, the likelihood will be assessed – also on a scale (from irrelevant to extreme). The assessment will be carried out from a gross perspective (without mitigating measures). After the positive or negative impact has been assessed, a brief reasoning for the assessment should be provided. For long-term time horizon, the expected time horizon shall be indicated. The highest rated dimension per each impact is decisive for materiality of the respective impact and thus the corresponding ESRS topic. For instance: for potential impacts and depending on the threshold defined, the respective impact is material if any severity rating, i.e., scale, scope or irremediability (for negative impacts only) exceeds this threshold. To be consistent with the threshold logic of Qualitative Risks and Opportunities used in the Enterprise Risk Management system of LHG the same threshold is used for potential positive and negative impacts. The Assessment is carried out by the LHG Sustainability Team with the help of external expertise. This is followed by validation by LHG experts and other stakeholders. Finally, management approval is obtained for the assessment. Managing environmental impacts: An IRO owner is defined for each IRO assessed as material. The IRO owners must regularly check whether the IROs for which they are responsible are complete and up to date. The management of this process (assessment and steering of impacts) will be set up in 2024 and will supplement the existing risk management process (see above). In addition, the Executive Board will in future also be regularly informed about the material impacts of LHG and will report annually to the Audit Committee on the performance of the IRO system.

(2.2.7) Are the interconnections between environmental dependencies, impacts, risks and/or opportunities assessed?

Interconnections between environmental dependencies, impacts, risks and/or opportunities assessed

☑ No

Primary reason for not assessing interconnections between environmental dependencies, impacts, risks and/or opportunities

☑ Not an immediate strategic priority

Explain why you do not assess the interconnections between environmental dependencies, impacts, risks and/or opportunities

Not assessing the interconnections between environmental dependencies, impacts, risks, and opportunities occur due to several reasons:
1. Complexity and Uncertainty:
o Understanding the interconnections requires complex modeling and analysis, which is difficult to execute accurately.
o The inherent uncertainty in predicting environmental changes and their impacts make such assessments challenging.

2.Lack of Data:
o Insufficient data on environmental factors, dependencies, and impacts hinder thorough assessments.
o Inconsistent or incomplete data collection methods lead to gaps in understanding the interconnections.

3. Resource Constraints:
o Assessing these interconnections requires significant time, expertise, and financial resources.
o There is a lack of necessary tools, technology, or skilled personnel to conduct comprehensive analyses.

4. Not an immediate strategic priority:
o the assessment of interconnections is currently less relevant to our core business operations or strategic goals.

(2.3) Have you identified priority locations across your value chain?

Identification of priority locations

☑ No, but we plan to within the next two years

Primary reason for not identifying priority locations

☑ Not an immediate strategic priority

(2.3.8) Explain why you do not identify priority locations

LHG currently see no immediate strategic priority for identifying priority locations, but LHG conduct an overall screening of their suppliers to identify risks or negative impacts on ESG topics. LHG plans to further improve this process in the near future.

(2.4) How does your organization define substantive effects on your organization?

Risks

Type of definition

☑ Qualitative
☑ Quantitative

Indicator used to define substantive effect

☑ EBITDA

Change to indicator

☑ Absolute decrease

Absolute increase/ decrease figure

325000000

Metrics considered in definition

☑ Likelihood of effect occurring

Application of definition

A substantive financial or strategic impact on our business is defined in our risk management process as follows: either the effect on EBIT is more than 325 mn and the probability of occurrence is above 2%, or the effect on EBIT is 162,5 mn and the probability of occurrence is above 30%. We consider any opportunity or risk to be of substantive strategic impact if it's materially affects Lufthansa Group's future business potential and, therefore, its valuation. This includes changes of future growth potential – e.g. due to changes of customer satisfaction, regulatory limitations, financing capabilities, etc. – as well as changes of future profitability (EBIT margin, ROCE) – e.g. due to changes of cost positions, capital efficiency, etc.. The methodological evaluation of risks having a substantive financial impact on LHG business within the Enterprise Risk Management at Lufthansa Group (LHG) distinguishes between qualitative and quantitative risks. Climate-related risks are updated and (re-)assessed on a quarterly basis. Financial impacts of climate-related risks are quantified if possible, otherwise they are described as qualitative risks. Qualitative risks are long-term developments and challenges with potentially adverse consequences for the LHG. Qualitative risks are often identified in the form of weak signals. As specific information often is not available, these risks can either not be quantified precisely or not quantified at all. To evaluate them as systematically as possible, estimates are made about the probability of their occurrence and their significance. Significance describes the potential impact of the individual risk or development under consideration of the reputation, the business model or earnings of the LHG. After evaluation, both the individual qualitative and quantitative risks are divided into priority classes A, B, C and D to assess their materiality. The thresholds for classifying the financial effects are defined centrally for the LHG according to standardized criteria.

Opportunities

Type of definition

☑ Qualitative
☑ Quantitative

Indicator used to define substantive effect

☑ Indirect operating costs

Change to indicator

☑ % decrease

% change to indicator

☑ 1-10

Metrics considered in definition

☑ Time horizon over which the effect occurs

Application of definition

We consider any opportunity to be of substantive strategic impact if it's materially affects Lufthansa Group's future business potential and, therefore, its valuation. This includes changes of future growth potential – e.g. due to changes of customer satisfaction, regulatory limitations, financing capabilities, etc. – as well as changes of future profitability (EBIT margin, ROCE) – e.g. due to changes of cost positions, capital efficiency, etc..

C3. Disclosure of risks and opportunities

(3.1) Have you identified any environmental risks which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

Climate change

Environmental risks identified

☑ Yes, only within our direct operations

Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

☑ Evaluation in progress

Please explain

To better assess the potential materiality of the identified climate risks and opportunities, the Lufthansa Group undertook climate scenario analysis on a regular basis. In 2023 LHG undertook a new qualitative climate scenario analysis identified both transitory and physical climate risks and opportunities and assessed their relevance to the Lufthansa Group. Within this analysis we have identified climate change risks in our direct operations as well as in our upstream and downstream value chain. In the area of our direct operations, we are able to estimate the financial impact on LHG for some of the identified risks. However, this does not apply to our upstream and downstream value chain, where further analysis of potential financial impacts is still required.

Plastics

Environmental risks identified

☑ No

Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

☑ Environmental risks exist, but none with the potential to have a substantive effect on our organization

Please explain

The amount of plastic products used is low and most of it goes into a recycling process after use. In addition, the Lufthansa Group is working on gradually reducing single-use plastic products on board its aircraft.

(3.1.1) Provide details of the environmental risks identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

Risk identifier

☑ Risk1

Risk types and primary environmental risk driver

Policy

☑ Carbon pricing mechanisms

Value chain stage where the risk occurs

☑ Direct operations

Country/area where the risk occurs

☑ Germany

Organization-specific description of risk

Cost risks are increasing due to stricter rules and carbon pricing changes under the EU Emissions Trading Scheme (ETS), part of the Fit for 55 legislative package. End of 2022, the EU agreed to reduce emissions certificates and end free allocations by 2026, raising costs for European airlines and potentially shifting long-haul flights to non-European hubs, increasing competition with non-EU airlines.In 2023, LHG emitted about 8.5 m t of CO2 within the European Economic Area, around 32% of its total direct emissions. The price of EU allowances rose from 25 per t of CO2 in 2019 to an average of 84 in 2023 and is expected to increase further due to a shortage of allowances. Higher emissions costs could reduce LHG's profits and demand for European flights if passed on to customers. Another ETS-related risk is the potential expansion of its scope to include all departing flights in regulated areas, significantly increasing emissions costs. Starting Jan. 1, 2024, all flights between CORSIA member states must offset CO2 using CORSIA-certified units. Key risks include: 1. Price risk: The market for CORSIA units is underdeveloped, with potential supply shortages and low liquidity. The EU has not yet defined which units can be used by EU carriers, making price forecasting difficult. 2. Volume risk: The amount of CO2 to offset depends on the airline industry's growth, which is not yet clear. More countries joining CORSIA will increase offset costs as more flights require compensation.

Primary financial effect of the risk

☑ Increased direct costs

Time horizon over which the risk is anticipated to have a substantive effect on the organization

☑ Long-term

Likelihood of the risk having an effect within the anticipated time horizon

☑ More likely than not

Magnitude

☑ Medium

Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

As an effect of this risk on the financial position and/or performance of LHG, a competitive disadvantage for LHG compared to non-European airlines can be anticipated. The risk of a potential shift of long-haul flights to non-European hubs is quite probable and can lead to a deterioration of LHG's financial position compared to non-European competitors, especially in combination with other one-sided state or regional cost burdens (such as the german air traffic tax). It is very difficult to determine an exact figure on how this financial position will change in comparison to competitors as a result of these regulations, as both statements on price development and price elasticity in comparison to competitors over a longer period of time are associated with a great deal of uncertainty and the interaction of several effects can also significantly change the situation. As a rough estimate, the effects of the entire EU climate protection package 'Fit for 55' - with a tightening of the EU ETS as well as an SAF quota and an adjustment of the EU Energy Tax Directive - will lead to considerable competitive disadvantages for European network airlines because it will make transferring via EU hubs more expensive: A Lufthansa flight from Madrid with a transfer in Frankfurt to Shanghai and back will lead to a 4-5 times higher increase in the price of flight tickets in 2035 than travelling with a non-EU airline via Istanbul.

Are you able to quantify the financial effect of the risk?

☑ Yes

Anticipated financial effect figure in the long-term – minimum (currency)

781000000

Anticipated financial effect figure in the long-term – maximum (currency)

1399000000

Explanation of financial effect figure

*The potential anticipated financial effect figure (minimum/maximum) is estimated for the year 2030 (description below) and these costings are provided only as an illustration of how the financial impacts may be calculated. It should not be interpreted as a definitive projection of the LHG's financial risk or future financial performance. The approach to calculate the figure is based on the revision of the EU Emissions Trading System (EU ETS) rules on aviation in the EU, which will phasing out free allowances for the aviation sector by 2026. As a result, the LHG will have to purchase CO_2 emission allowances (EUA) for all flights covered by the EU ETS (intra EU/EEA) in 2030. We assume at this point that the Swiss ETS and the UK ETS will adopt these regulations. The calculated value is therefore dependent on the development of LHG's absolute CO_2 emissions within the EU and the EUA price per t CO_2 in 2030. Formula for calculate the financial impact figure: x*y z: Scenario for x. Estimated EU ETS allowance relevant CO_2 emissions of the LHG in 2030. y. Estimated cost of EU allowances (price per tonne of CO_2) z. Financial impact figure 1. "Anticipated financial effect figure in the long-term – minimum" Scenario for "x ": In this scenario we assume growth of the EU ETS relevant CO_2 emissions of the LHG by 2 % per anno between 2024 and 2030. The emissions of the LHG that fall under the EU ETS rules are thus 9,76 mn tonnes end of 2030. Scenario for y: The prices for EUA in 2023 were in average at 84. In the calculation used for the minimum scenario, a price of 80 /t CO_2 is used for the year*

*2030. Calculation for z: Estimated EUA's LHG in 2030 (x) * Estimated price per EUA in 2030(y) Estimated financial impact of EU ETS for LHG in2030 (z). This equals to 9,760,000 t CO_2 * 80/t CO_2 781,000,000) 2."Anticipated financial effect figure in the long-term – maximum" Scenario for "x ": In this scenario we assume growth of the EU ETS relevant CO_2 emissions of the LHG by 4 % per anno between 2024 and 2030. The emissions of the LHG that fall under the EU ETS rules are thus 11,19 mn tonnes end 2030. Scenario for y: The prices for EUA in 2023 were in average at 84. In the calculation used for the maximum scenario, a price of 125 /t CO_2 is used for the year 2030. Calculation for z: Estimated EUA's LHG in 2030 (x) * Estimated price per EUA in 2030(y) Estimated financial impact of EU ETS for LHG in2030 (z). This equals to 11,190,000 t CO_2 * 125/t CO_2 1,3*

Primary response to risk

Engagement

☑ Engage with regulators/policy makers

Cost of response to risk

0

Explanation of cost calculation

There are no relevant external costs for political lobbying.

Description of response

As currently the most important instrument for reducing the cost risk, the LHG relies on intensive political lobbying to draw attention to the competition-distorting effects of the EU ETS regulation under the EU Fit for 55 package.

(3.1.2) Provide the amount and proportion of your financial metrics from the reporting year that are vulnerable to the substantive effects of environmental risks.

Climate change

Financial metric

☑ OPEX

Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

7931000000

% of total financial metric vulnerable to transition risks for this environmental issue

☑ 21-30%

Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

0

% of total financial metric vulnerable to physical risks for this environmental issue

☑ Less than 1%

Explanation of financial figures

With regard to the financial transition risk described in 3.1.1, which results from the SA blending quota in accordance with the ReFuel EU regulation, the risk exposure was calculated on the basis of the share of fuel expenses in total operating expenses. The expenses for fuel procurement for the LHG fleet in 2023 amounted to 7,931,000,000. The total operating expenses in 2023 amounted to 35,960,000,000. The share was 22% accordingly.

(3.5.2) Provide details of each Emissions Trading Scheme (ETS) your organization is regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS

28.4

% of Scope 2 emissions covered by the ETS

0

Period start date

12/31/2022

Period end date

12/30/2023

Allowances allocated

3155872

Allowances purchased

3.17

Verified Scope 1 emissions in metric tons CO2e

7625784

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

☑ Facilities we own and operate

Comment

The ETS relevant numbers here are based on aircraft owned by, and flights operated by Lufthansa German Airlines, SWISS, Austrian Airlines, Brussels Airlines, Eurowings, Discover Airlines, Edelweiss and Lufthansa Cargo. Lufthansa German Airlines also includes regional airlines Lufthansa City Airlines and Air Dolomiti. Furthermore, Lufthansa Technik is included.

Switzerland ETS

% of Scope 1 emissions covered by the ETS

2.6

% of Scope 2 emissions covered by the ETS

0

Period start date

12/31/2022

Period end date

12/30/2023

Allowances allocated

459037

Allowances purchased

60000

Verified Scope 1 emissions in metric tons CO2e

701552

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

☑ Facilities we own and operate

Comment

The ETS relevant numbers here are based on aircraft owned by, and flights operated by Lufthansa German Airlines, SWISS, Austrian Airlines, Brussels Airlines, Eurowings, Discover Airlines, Edelweiss and Lufthansa Cargo. Lufthansa German Airlines also includes regional airlines Lufthansa City Airlines and Air Dolomiti. Furthermore, Lufthansa Technik.

UK ETS

% of Scope 1 emissions covered by the ETS

0.7

% of Scope 2 emissions covered by the ETS

0

Period start date

12/31/2022

Period end date

12/30/2023

Allowances allocated

184056

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

194842

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

☑ Facilities we own and operate

Comment

In 2023, emissions from flights falling under the UK ETS remained below the level of free allowances. The reason for this is that the measurement of the flight performance which is relevant for the amount of allocated allowances was made at a point in time when the DLH Group had a higher share of UK ETS relevant traffic. The ETS relevant numbers here are based on aircraft owned by, and flights operated by Lufthansa German Airlines, SWISS, Austrian Airlines, Brussels Airlines, Eurowings, Discover Airlines, Edelweiss and Lufthansa Cargo. Lufthansa German Airlines also includes regional airlines Lufthansa City Airlines and Air Dolomiti. Furthermore, Lufthansa Technik.

Other ETS, please specify: CORSIA

% of Scope 1 emissions covered by the ETS

0

% of Scope 2 emissions covered by the ETS

0

Period start date

12/31/2022

Period end date

12/02/2023

Allowances allocated

0

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

0

Verified Scope 2 emissions in metric tons CO2e

0

(3.5.2.9) Details of ownership

☑ Facilities we own and operate

Comment

Instrument mentioned here: CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation). On June 30th 2020, ICAO Council passed a resolution to adjust the baseline for CORSIA. ICAO's Council agreed to omit 2020 from the carbon neutral growth baseline (new baseline: 2019 only) for CORSIA's first three years (2021-2023). Both LHG and the entire aviation sector covered by CORSIA did not exceed the 2019 emission levels in 2023. Therefore, LHG does not have to meet any requirements with regard to CO_2 under CORSIA in 2023 (besides the reporting requirements).

(3.6) Have you identified any environmental opportunities which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

	Environmental opportunities identified
Climate change	☑ Yes, we have identified opportunities, and some/all are being realized

(3.6.1) Provide details of the environmental opportunities identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

Opportunity identifier

☑ Opp1

Opportunity type and primary environmental opportunity driver

Resource efficiency

☑ Cost savings

Value chain stage where the opportunity occurs

☑ Direct operations

Country/area where the opportunity occurs

☑ Austria
☑ Belgium
☑ Germany
☑ Switzerland

Organization specific description

The LHG is constantly working on improving its specific fuel consumption and CO_2 emissions. Fleet renewal remains the key driver for reducing CO_2 in the medium and long term. Lufthansa Group continuously invests in modern, fuel-efficient aircraft and engine technologies, which represent the most important element in reducing CO_2 emissions from flight operations. In 2023, the LHG took delivery of 24 new aircraft which are up to 30% more fuel efficient than the predecessor model. In turn, a total of 18 older aircraft were removed from the Group fleet. At year-end 2023, there were 253 aircraft on the Lufthansa Group's order list and options to buy a further 161 aircraft until 2032. The continuous fleet renewal reduces LHG's climate impact and has also an impact on operating costs by reducing fuel cost and carbon compliance costs under the EU ETS and global CORSIA schemes, as captured in the risk calculations. In addition, competitive advantages can be gained as a fuel- and CO_2-efficient fleet not only reduces operating costs, but also brings reputational gains

Primary financial effect of the opportunity

☑ Reduced direct costs

Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

☑ The opportunity has already had a substantive effect on our organization in the reporting year

Magnitude

☑ Medium-high

Effect of the opportunity on the financial position, financial performance and cash flows of the organization in the reporting period

Lufthansa Group is making extensive investments in the modernisation of its fleet, on-board and ground products as well as in infrastructure in order to ensure profitable long-term growth. Additional aircraft will very largely replace older, less efficient models. The financial impact of new aircraft can be divided into short- and long-term impact: 1. Short-Term Impact: o Increased Assets and Liabilities: Initial increase in both assets (new aircraft and technology) and liabilities (debt or lease obligations). o High Expenditure: Significant initial expenditure and cash outflows due to capital investments, financing, and integration costs. o Impact on Profitability: Higher depreciation and financing costs may impact profitability negatively in the short term. 2. Long-Term Impact: o Improved Efficiency and Revenue growth: Over time, operational savings, enhanced capacity and customer satisfaction can increased revenue, and can lead to improved financial performance. o Asset Depreciation: While depreciation reduces the book value of assets, newer aircraft typically have longer useful lives, which can be favorable over time. o Cash Flow Stabilization: As initial costs are amortized, cash flows may stabilize or improve due to operational efficiencies and revenue growth. In summary, while the introduction of new aircraft and technology can strain an airline's financials in the short term due to high upfront costs and increased liabilities, the long-term benefits often include improved efficiency, higher revenue potential, and better cash flow, contributing to the overall financial health of the airline. In the reporting year 29 new aircraft were added to LHG fleet, compared with 18 retirements. The new additions comprised 24 new aircraft and five used aircraft. The new aircraft have up to 30% lower fuel

consumption and carbon emissions as well as a higher load capacity compared with their direct predecessor models. They therefore make an important contribution to the ongoing fleet modernization which lead to lower operating and maintenance costs, which can lead to higher revenue potential. Furthermore, the new aircraft improve the financial position through an increase in LHGs fixed assets. At year-end 2023, there were 253 new, fuel efficient aircraft on the LHG's order list until 2032. There are also options to buy a further 161 aircraft.

Are you able to quantify the financial effects of the opportunity?

☑ Yes

Financial effect figure in the reporting year (currency)

80824000

Explanation of financial effect figures

*The above mentioned potential financial impact figure is estimated for the reporting year 2023 and these savings are provided only as an illustration of how the financial impacts may be calculated. It should not be interpreted as a definitive projection of LHG's financial opportunity or future financial performance. The approach used for the calculation is based on the fuel and CO_2 efficiency improvements of new aircraft – further financial effects (e.g. through higher capacity of new aircrafts, a higher customer satisfaction or future financial impact of a gradual increase in the SAF blend ratio, which is intended to be introduced as part of the implementation of the EU Fit for 55 package) are not taken into account here. In 2023, a total of 24 new aircraft were put into service within LHG. Around 20 % of these were long-haul and 80 % short- and medium-haul aircraft (corresponding to the shares of the entire Lufthansa fleet). These aircraft have an up to 30 % better fuel and emissions balance than their predecessors. LHG's entire fleet consisted of 721 aircraft at the end of 2023, meaning that the proportion of new aircraft added in the reporting year was 3.3 %. The fuel consumption of the LHG fleet in 2023 was 8,451,407 tonnes. This resulted in 26,621,932 CO2e emissions. The fuel costs amounted to EUR 7,931,000,000 and the expenses for emission certificates to EUR 233,000,000. These figures are used to estimate the financial cost-saving effect that the new aircraft will have on fuel costs and emissions certificate costs in 2023. To simplify the calculation, it was assumed that all of the 24 new aircraft were already in operation for the entire year 2023. Calculation formula financial impact of opportunity in 2023: Financial impact (cost of jet fuel in 2023 * share of new aircraft in LHG fleet in 2023 * improvement in fuel efficiency of new aircraft) (expenses for CO_2 emission certificates in 2023 * share of new aircraft in LHG fleet in 2023 * improvement in CO_2 efficiency of new aircraft) (7,931,000,000 * 0.033 * 0.3) (233,000,000 * 0.033 * 0.3) 78,517,00 2,307,000 mn 80,824,000 Remark: this financial effect will be realized also for the following years.*

Cost to realize opportunity

2128000000

Explanation of cost calculation

The above mentioned cost to realize the opportunity covers expenses for the procurement of new aircraft and engines in the reporting year 2023 (see LHG annual report 2023, page 197). Cost calculation formula is: Invest for new aircraft and engines in 2023 (x) z (Cost to realize opportunity). Scenario for x: At the end of 2023, a total of 24 new aircraft were put into service at LHG

Strategy to realize opportunity

LHG has set ambitious climate protection targets to mitigate its climate change impact as well as to reduce the cost related to the climate change risks. It is striving to lower its net CO_2 emissions to half of 2019 levels by 2030 and is seeking to be carbon-neutral by 2050. Furthermore, LHG has aligned its carbon reduction pathway with the targets of the Paris Climate Agreement. These LHG target by 2030 was validated from SBTI in August 2022. The cost calculation to realize the opportunity covers the reporting year 2023 and are made up of the lever which is by far the most invest-intensive and at the same time the most climate (cost)-effective: fleet renewal. Lufthansa Group continuously invests (approx. 2.0 bn annually until 2030) in modern, fuel-efficient aircraft and engine technologies, which represent the most important element in reducing CO_2 emissions from flight operations. At year-end 2023, there were 253 aircraft on the Lufthansa Group's order list until 2032. There are also options to buy a further 161 aircraft.

(3.6.2) Provide the amount and proportion of your financial metrics in the reporting year that are aligned with the substantive effects of environmental opportunities.

Climate change

Financial metric

☑ CAPEX

Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

3789000000

% of total financial metric aligned with opportunities for this environmental issue

☑ 81-90%

Explanation of financial figures

The method used was the classification system of the EU Taxonomy Regulation for green economic activities as part of the EU action plan 'Financing Sustainable Growth'. Accordingly, passenger and cargo air transport, which represent the main business activities of the Lufthansa Group, were recognised as taxonomy-eligible

economic activities. The economic activities of the Lufthansa Group to be reported here extend to environmental objective 1 (climate protection) of the EU Taxonomy Regulation. In accordance with the requirements of the EU Taxonomy, the share of revenue, CapEx and OpEx of the identified economic activities was determined in relation to the total Group activities. The calculation of CapEx used here was carried out on a gross basis, i.e. without taking into account revaluations or depreciation and amortisation. The taxonomy-eligible CapEx was determined taking into account the underlying accounts in combination with the asset classes. CapEx for economic activities 'Passenger and cargo air transport' includes expenses for aircraft and reserve engines, rights of use for aircraft and reserve engines as well as advance payments on aircraft orders and aircraft under construction. At EUR 3,789m, they account for 88% of the Lufthansa Group's total capital expenditure. The procedure is described in more detail in the Lufthansa Group's Annual Report 2023.

C4. Governance

(4.1) Does your organization have a board of directors or an equivalent governing body?

Board of directors or equivalent governing body

☑ Yes

Frequency with which the board or equivalent meets

☑ More frequently than quarterly

Types of directors your board or equivalent is comprised of

☑ Executive directors or equivalent
☑ Non-executive directors or equivalent
☑ Independent non-executive directors or equivalent

Board diversity and inclusion policy

☑ Yes, and it is publicly available

Briefly describe what the policy covers

The Supervisory Board also takes diversity into account. As a decision-making criterion, the Supervisory Board particularly considers diversity as being displayed by different, mutually complementary profiles and professional backgrounds also at the international level, an appropriate gender representation and an appropriate

average age. In accordance with legal requirements, the Executive Board shall include at least one woman and at least one man. To this end, the Supervisory Board has adopted the following diversity concept for the composition of the Executive Board. This also takes into account the recommendations of the German Corporate Governance Code (GCGC).

Attach the policy (optional)

Board of Management and Supervisory Board procedures - Lufthansa Group Investor Relations.pdf

(4.1.1) Is there board-level oversight of environmental issues within your organization?

	Board-level oversight of this environmental issue
Climate change	☑ Yes

(4.1.2) Identify the positions (do not include any names) of the individuals or committees on the board with accountability for environmental issues and provide details of the board's oversight of environmental issues.

Climate change

Positions of individuals or committees with accountability for this environmental issue

☑ Chief Financial Officer (CFO)
☑ Chief Sustainability Officer (CSO)
☑ Board-level committee
☑ Other, please specify :Supervisory Board

Positions' accountability for this environmental issue is outlined in policies applicable to the board

☑ Yes

Policies which outline the positions' accountability for this environmental issue

☑ Board mandate

Frequency with which this environmental issue is a scheduled agenda item

☑ Scheduled agenda item in some board meetings – at least annually

Governance mechanisms into which this environmental issue is integrated

☑ Reviewing and guiding annual budgets
☑ Overseeing the setting of corporate targets
☑ Monitoring progress towards corporate targets
☑ Overseeing and guiding public policy engagement
☑ Approving and/or overseeing employee incentives
☑ Overseeing and guiding major capital expenditures
☑ Monitoring the implementation of the business strategy
☑ Monitoring the implementation of a climate transition plan
☑ Overseeing and guiding the development of a business strategy
☑ Overseeing and guiding acquisitions, mergers, and divestitures
☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities

Please explain

Group Executive Board of Deutsche Lufthansa AG: In 2023, the Group Executive Board reviewed the Group's climate strategy, measures, and targets. The Executive Board member in charge of LHGs Brand & Sustainability function - the Chief Sustainability Officer (CSO) - is responsible for identifying and assessing the Company's climate-related risks and opportunities, strategy, metrics and target setting. The Executive Board met every two weeks, addressing climate issues related to strategy, risk management, and major investments such as aircraft or Sustainable Aviation Fuel (SAF). Climate considerations were integrated into board decisions on strategy and major expenditures. The ESG strategy, focused on CO_2 mitigation, was reviewed annually and discussed during Strategic Roadmap Discussions. Key decisions included:
• 2023: Introduction of Green Fares at multiple airlines, incorporating 20% SAF and 80% high-quality climate protection projects, making LHG the first airline group to offer this.
• 2022: Alignment with SBTi criteria to reduce CO_2 intensity by 30.6% from 2019 to 2030 (SBTI validation in July 2022), aiming for net-zero emissions by 2050, and allocating USD 250 million for SAF until 2024. The CFO is overseeing and guiding major capital expenditures (e.g. for new aircraft) as well as acquisitions, mergers, and divestitures (e.g. in 2023 the sale of the remaining part of the LSG Group). He is also approving and/or overseeing employee incentives. Supervisory Board of Deutsche Lufthansa AG: The Supervisory Board annually reviews the environmental strategy as part of the LHG Strategy, including targets and major projects like fleet renewal and SAF. In 2023, the Supervisory Board had a deep dive meeting on the ESG strategy, presented by the CSO, and received at least once a year an ESG update. Climate related decisions: In December 2022, they increased the weight of sustainability targets in long-term variable remuneration from 15% to 20%, effective 2023. An ESG Committee was established on January 1, 2023, to advise on environmental, social, and governance issues, meeting twice a year.

(4.2) Does your organization’s board have competency on environmental issues?

Climate change

Board-level competency on this environmental issue

☑ Yes

Mechanisms to maintain an environmentally competent board

☑ Consulting regularly with an internal, permanent, subject-expert working group
☑ Engaging regularly with external stakeholders and experts on environmental issues
☑ Integrating knowledge of environmental issues into board nominating process
☑ Regular training for directors on environmental issues, industry best practice, and standards (e.g., TCFD, SBTi)

(4.3) Is there management-level responsibility for environmental issues within your organization?

	Management-level responsibility for this environmental issue
Climate change	☑ Yes

(4.3.1) Provide the highest senior management-level positions or committees with responsibility for environmental issues (do not include the names of individuals).

Climate change

Position of individual or committee with responsibility

Executive level
☑ Chief Sustainability Officer (CSO)

Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

Policies, commitments, and targets

☑ Measuring progress towards environmental corporate targets

☑ Measuring progress towards environmental science-based targets

☑ Setting corporate environmental policies and/or commitments

☑ Setting corporate environmental targets

Strategy and financial planning

☑ Developing a climate transition plan

☑ Implementing the business strategy related to environmental issues

☑ Managing annual budgets related to environmental issues

☑ Managing major capital and/or operational expenditures relating to environmental issues

☑ Managing priorities related to innovation/low-environmental impact products or services (including R&D)

Other

☑ Providing employee incentives related to environmental performance

Reporting line

☑ Reports to the board directly

Frequency of reporting to the board on environmental issues

☑ More frequently than quarterly

Please explain

The highest monitoring body in the area of sustainable management is the Supervisory Board. Effective 1 January 2023, the Supervisory Board established an ESG Committee to advise the Supervisory Board, its committees and the Executive Board on environmental, social and governance issues of sustainable corporate governance and the Company's business activities in ESG areas. It met twice in 2023. Focus topics were the steps taken by flight operations to reduce emissions, sustainable aviation fuels and the changing requirements for sustainability reporting. The Executive Board (EB) member in charge of the LHG's Brand & Sustainability function is responsible for the Company's environmental, climate and social impact at EB level. The Corporate Responsibility department reports directly to the EB member for Brand & Sustainability and is primarily responsible for ESG strategy, ESG reporting and ratings, customer concerns and ESG communication in cooperation with the respective departments of the LHG. The ESG strategy is reviewed annually and discussed with the EB as part of the Strategic Roadmap Discussions. In the reporting year, the focus was on the LHG's carbon transition pathway and supporting measures, such as its Sustainable Aviation Fuel (SAF) strategy and in-flight and ground-based efficiency measures.

(4.5) Do you provide monetary incentives for the management of environmental issues, including the attainment of targets?

Climate change

Provision of monetary incentives related to this environmental issue

☑ Yes

% of total C-suite and board-level monetary incentives linked to the management of this environmental issue

20

Please explain

Executive Board remuneration consists of fixed, performance-unrelated and performance-related variable components. The three main components are the base salary, the one-year variable remuneration (annual bonus) and the multi-year variable remuneration (long-term incentive, LTI). 20% of the target achievement of the annual bonus and the LTI is based on non-financial sustainability targets. The Supervisory Board specified the "Environment" parameter as a focus topic for the LTI targets. This provides a LTI for the target of reducing CO_2 emissions and is based on the LHG's long-term strategy. Since 2022, the LHG's targets for reducing its CO_2 emissions have been aligned with the "Science Based Targets" (SBT). The reduction target for the LTI 2022-2025 is based on the SBT target of a 30.6% reduction in specific CO_2 emissions by 2030 by comparison with the 2019 base year. The LTI target is a 13 % point reduction by the end of the performance period on 31.12.2025.

(4.5.1) Provide further details on the monetary incentives provided for the management of environmental issues (do not include the names of individuals).

Climate change

Position entitled to monetary incentive

Board or executive level

☑ Board/Executive board

Incentives

☑ Shares

Performance metrics

Emission reduction

☑ Reduction in emissions intensity

Incentive plan the incentives are linked to

☑ Long-Term Incentive Plan, or equivalent, only (e.g. contractual multi-year bonus)

Further details of incentives

Long-term variable remuneration: To promote the long-term, sustainable development of the company, the long-term variable remuneration, and therefore the majority of variable remuneration, depends on the achievement of long-term targets. Taking the absolute and relative share performance into account aligns the interests of Executive Board members closely with those of shareholders. Long-term variable remuneration commitment 2022 (LTI 2022–2025): Since financial year 2020, the long-term variable remuneration commitment for Executive Board members is share-based. At the beginning of the performance period, the Executive Board members receive a number of virtual shares corresponding to the value of the contractually granted target amount. The number of virtual shares is determined by reference to the average price of the Lufthansa share in the first 60 trading days after the four-year performance period begins. The average price for the LTI 2022–2025 is 7.00. The final number of virtual shares depends on the achievement of the financial performance targets Adjusted ROCE (40%) and relative total shareholder return (40%), as well as the non-financial strategic and sustainability targets (20%). The Supervisory Board has specified the "Environment" parameter as a focus topic for the strategic and sustainability targets in the LTI 2022–2025. This provides a long-term incentive for the environmental target of reducing CO_2 emissions. 20% of the target achievement of the long-term incentive is based on the environmental target of reducing CO_2 emissions. The "Environment"

sustainability target is based on the Lufthansa Group's long-term strategy. Since 2022, the Lufthansa Group's targets for reducing its CO_2 emissions have been aligned with the "Science Based Targets" (SBT). The reduction target for the LTI 2022–2025 is based on the long-term target of a 30.6% reduction in specific CO_2 emissions by 2030 by comparison with the 2019 base year. The target is a 13 percentage point reduction by the end of the performance period on 31 December 2025. The end points of the range are defined by a deviation of /– 2 percentage points from the target. Interim figures are linearly interpolated.

How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

The Supervisory Board has specified the "Environment" parameter as a focus topic for the strategic and sustainability targets in the LTI 2022-2025 for the executive board. This provides a long-term incentive for the environmental target of reducing CO_2 emissions. Linking the LTI to the verified SBT underpins the climate commitments and the climate transition plan of LHG.

(4.6) Does your organization have an environmental policy that addresses environmental issues?

	Does your organization have any environmental policies?
	☑ Yes

(4.6.1) Provide details of your environmental policies.

Row 1

Environmental issues covered

☑ Climate change

Level of coverage

☑ Organization-wide

Value chain stages covered

☑ Direct operations
☑ Upstream value chain
☑ Downstream value chain

Explain the coverage

LHG has issued and published two policies / codes of conducts - one focusing on the employees of LHG and one focusing on the suppliers and business partners of LHG. Among other things, both explain the company's climate and environmentally relevant principles and values and describe the expectations that the company has of its employees, business partners and suppliers. These expectations go far beyond compliance with applicable laws, regulations and internal rules and guidelines and show which internationally recognized agreements and obligations LHG is guided by (e.g. SDGs, SBTI, "Stockholm Convention on Persistent Organic Pollutants" or "Montreal Protocol on Substances that Deplete the Ozone Layer").

Environmental policy content

Environmental commitments

☑ Commitment to comply with regulations and mandatory standards
☑ Commitment to take environmental action beyond regulatory compliance

Climate-specific commitments

☑ Other climate-related commitment, please specify**:** SBTi commitment and validated target

Social commitments

☑ Adoption of the UN International Labour Organization principles
☑ Commitment to respect internationally recognized human rights

Indicate whether your environmental policy is in line with global environmental treaties or policy goals

☑ Yes, in line with another global environmental treaty or policy goal, please specify**:** UN Global Compact

Public availability

☑ Publicly available

Attach the policy

Code of Conduct AND Supplier Code of Conduct.pdf

(4.10) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

Are you a signatory or member of any environmental collaborative frameworks or initiatives?

☑ Yes

Collaborative framework or initiative

☑ Science-Based Targets Initiative (SBTi)

☑ Task Force on Climate-related Financial Disclosures (TCFD)

☑ UN Global Compact

☑ Other, please specify **:**Roundtabel for Sustainable Biomaterials (RSB), First Movers Coalition (FMC), SAFUG - Sustainable Aviation Fuel Users Group, Business Ambition for 1.5C, Aviation Alliance Fit for 55

Describe your organization’s role within each framework or initiative

SBTI: LHG has validated its climate target 2030 by SBTI in 2022. UN Global Compact: Signatory Member, yearly communication on progress Roundtable on Sustainable Biomaterials (RSB): As member of the Roundtable on Sustainable Biomaterials, LHG support the RSB sustainability framework, a rigours standard for sustainable production in the biocircular economy – underpinned by 12 key principles and their underlying criteria. First Movers Coalition (FMC): On March 28, 2023, the Lufthansa Group became the first European airline group to join the First Movers Coalition (FMC). FMC is a global initiative led by the World Economic Forum and the U.S. Department of State. Since its launch at COP26 in 2021, it has been bringing together countries and companies worldwide to jointly promote the development and deployment of sustainable technologies of the future. Business Ambition for 1.5C: As SBTI validated company, LHG were automatically member of the Business Ambition for 1.5 degrees. Task Force on Climate-related Financial Disclosures (TCFD): Annual publication of a TCFD report Aviation Alliance Fit for 55: All the airlines of the Lufthansa Group are members of the Aviation Alliance Fit for 55, an alliance of European airlines and airports founded in 2022. The partners in the alliance have committed to the goal of carbon-neutral aviation by 2050 and have proposed competition-neutral solutions at the European level to achieve this.

(4.11) In the reporting year, did your organization engage in activities that could directly or indirectly influence policy, law, or regulation that may (positively or negatively) impact the environment?

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the environment

☑ Yes, we engaged directly with policy makers

☑ Yes, we engaged indirectly through, and/or provided financial or in-kind support to a trade association or other intermediary organization or individual whose activities could influence policy, law, or regulation

Indicate whether your organization has a public commitment or position statement to conduct your engagement activities in line with global environmental treaties or policy goals

☑ Yes, we have a public commitment or position statement in line with global environmental treaties or policy goals

Global environmental treaties or policy goals in line with public commitment or position statement

☑ Paris Agreement

Attach commitment or position statement

LH-AR-2023-e.pdf

Indicate whether your organization is registered on a transparency register

☑ Yes

Types of transparency register your organization is registered on

☑ Mandatory government register

Disclose the transparency registers on which your organization is registered & the relevant ID numbers for your organization

1. European Union: EU Transparency Register, reg. number:0714344663-32 (Lufthansa Group), reg. number 755555322381-50 (Brussels Airlines) / 2. Germany: lobbying register of the German Bundestag (lower house of parliament), registration number R001474 (Deutsche Lufthansa AG), reg. number R001213 (Eurowings GmbH), reg. number R000854 (Lufthansa Cargo AG), reg. number R003164 (Lufthansa Technik) / 3. Austria: Lobbying- and interest representation register, re. number LIVR-00193

Describe the process your organization has in place to ensure that your external engagement activities are consistent with your environmental commitments and/or transition plan

The processes at LHG to manage the multiple activities around climate change across business units (BUs) and geographies to ensure that LHG has a common approach that is consistent with LHG's strategy on climate change, is as follows: At Lufthansa Group the Executive Board has ultimate oversight of climate-related issues and has been responsible for reviewing LHG's climate related risks and opportunities, strategy, measures and target setting. At the Executive Board level, the Chief Sustainability Officer (CSO) takes over the responsibility for the company's environmental, climate and social effects. The definition of priorities and the further development of sustainability-relevant activities within the Lufthansa Group took place during the reporting year in the context of the Group Executive Board's meetings, as well as in the Group Executive Committee (GEC). The GEC, which is chaired by the Chief Executive Officer, is a senior management level entity and consists of the Executive Board of Deutsche Lufthansa AG, the CEOs of the segment parent companies, the senior executives of the Network Airlines and the heads of the Group's Strategy, Controlling and Communications departments.

(4.11.1) On what policies, laws, or regulations that may (positively or negatively) impact the environment has your organization been engaging directly with policy makers in the reporting year?

Row 1

Specify the policy, law, or regulation on which your organization is engaging with policy makers

EU ETS Revision (as part of the EU Fit for 55 regulation)

Environmental issues the policy, law, or regulation relates to

☑ Climate change

Focus area of policy, law, or regulation that may impact the environment

Financial mechanisms (e.g., taxes, subsidies, etc.)

☑ Emissions trading schemes

Geographic coverage of policy, law, or regulation

☑ Regional

Country/area/region the policy, law, or regulation applies to

☑ Europe

Your organization's position on the policy, law, or regulation

☑ Support with major exceptions

Details of any exceptions and your organization's proposed alternative approach to the policy, law, or regulation

LHG considers the adoption of market-based measures as an effective mean for reducing CO_2 emissions from aviation if they fulfill the following criteria: 1. ensure environmental integrity, 2. minimize administrative complexity, and 3. minimize competitive distortions. In principle, the ETS is an effective climate protection instrument because it prices, limits, and reduces CO_2. However, under the current EU ETS regulations and the reform plans, it is a disadvantage for EU network airlines and airports in intercontinental transfer traffic. This is because feeder flights via EU hubs are subject to ETS, whereas transfer connections via non-EU hubs are not. Thus, the ETS reform should include an urgently needed correction of this distortion of competition, instead for a tightening by extending the ETS scope to all departures in the EU. This would mean that EU airlines would buy ETS allowances for the entire journey, i.e. for the short feeder flight within the EU and the long-haul. In contrast, airlines with a transfer flight via a non-EU hub save themselves the purchase of allowances for the long and particularly expensive part of the route. Already without the extension of the scope, transfer traffic will be heavily shifted to non-EU hubs. Consequently, up to 260,000 jobs would be at risk, as an actual study shows (SEO Amsterdam Economics: Aviation "Fit for 55" – Ticket prices, demand and carbon leakage, 03/2022). With an extension to all departures in the EU, the effects would be further exacerbated. For the revision of the EU ETS within Fit for 55 Package and for ensuring fair competition and avoiding carbon leakage, LHG's alternative approach foresees the following: - Intercontinental transfer passengers travelling to or from the EU are subject to the ETS on feeder flights to European hubs. In contrast, a transfer at a non-EU hub implies that the feeder flight to this airport is not included. The EU policy should use the chance to correct this distortive element in competition. - The CO_2 emissions of international flights departing EU/EEA airspace is already covered under the landmark CORSIA, while the EU ETS covers flights within the EU. A unilateral decision by the EU to expand the scope of ETS extra-territorially to non-EU destinations will threaten the prospects for major global decarbonization efforts and would weaken and potentially dismantle the existing agreement (CORSIA as single global market-based measure applied to international aviation).

Type of direct engagement with policy makers on this policy, law, or regulation

☑ Ad-hoc meetings
☑ Discussion in public forums
☑ Responding to consultations
☑ Submitting written proposals/inquiries
☑ Participation in voluntary government programs
☑ Participation in working groups organized by policy makers

Funding figure your organization provided to policy makers in the reporting year relevant to this policy, law, or regulation (currency)

0

Explain the relevance of this policy, law, or regulation to the achievement of your environmental commitments and/or transition plan, how this has informed your engagement, and how you measure the success of your engagement

This regulation is not central to the achievement of LHGs climate transition plan

Indicate if you have evaluated whether your organization’s engagement on this policy, law, or regulation is aligned with global environmental treaties or policy goals

☑ Yes, we have evaluated, and it is aligned

Global environmental treaties or policy goals aligned with your organization's engagement on this policy, law or regulation

☑ Paris Agreement

Row 3

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Energy Taxation Directive (as part of the EU Fit for 55 regulation)

Environmental issues the policy, law, or regulation relates to

☑ Climate change

Focus area of policy, law, or regulation that may impact the environment

Financial mechanisms (e.g., taxes, subsidies, etc.)

☑ Taxes on products or services

Geographic coverage of policy, law, or regulation

☑ Regional

Country/area/region the policy, law, or regulation applies to

☑ Europe

Your organization's position on the policy, law, or regulation

☑ Oppose

Details of any exceptions and your organization's proposed alternative approach to the policy, law, or regulation

The ETD includes the introduction of a kerosene tax to commercial flights. A kerosene tax has no targeted effect on CO_2-reduction, but deprives European airlines of money that could otherwise be invested in sustainability and climate protection. Such a tax would be a tailwind for non-European airlines: These could continue to fly without this burden, while feeder flights via EU hubs as well as intra-European traffic is subject to such a tax - including leisure travel, which is so important for many EU countries.

Type of direct engagement with policy makers on this policy, law, or regulation

☑ Ad-hoc meetings
☑ Discussion in public forums
☑ Responding to consultations
☑ Submitting written proposals/inquiries
☑ Participation in voluntary government programs
☑ Participation in working groups organized by policy makers

Funding figure your organization provided to policy makers in the reporting year relevant to this policy, law, or regulation (currency)

0

Explain the relevance of this policy, law, or regulation to the achievement of your environmental commitments and/or transition plan, how this has informed your engagement, and how you measure the success of your engagement

This regulation is not central to the achievement of LHGs climate transition plan

Indicate if you have evaluated whether your organization’s engagement on this policy, law, or regulation is aligned with global environmental treaties or policy goals

☑ Yes, we have evaluated, and it is aligned

Global environmental treaties or policy goals aligned with your organization's engagement on this policy, law or regulation

☑ Paris Agreement

(4.11.2) Provide details of your indirect engagement on policy, law, or regulation that may (positively or negatively) impact the environment through trade associations or other intermediary organizations or individuals in the reporting year.

Row 1

Type of indirect engagement

☑ Indirect engagement via a trade association

Trade association

Global

☑ International Air Transport Association

Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

☑ Climate change

Indicate whether your organization's position is consistent with the organization or individual you engage with

☑ Consistent

Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

☑ Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

At the 77th IATA Annual General Meeting in Boston, USA, on 4 October 2021, a resolution was passed by IATA member airlines committing them to achieving net-zero carbon emissions from their operations by 2050. This pledge brings air transport in line with the objectives of the Paris agreement to limit global warming to 1.5C. To succeed, it will require the coordinated efforts of the entire industry (airlines, airports, air navigation service providers, manufacturers) and significant government

support. The net-zero objective will be met through a combination of maximum elimination of emissions at source and the use of approved offsetting and carbon capture technologies. The key elements of the emissions reduction strategy are: The use of Sustainable Aviation Fuel (SAF), sourc The use of Sustainable Aviation Fuel (SAF), sourced from feedstocks that do not degrade the environment or compete with food or water Investment in new aircraft technology, including radical new aerodynamic and alternative propulsion (electric or hydrogen) solutions Continued improvement in infrastructure and operational efficiency, with a particular focus on improved air traffic management The use of approved offsets including carbon capture and storage technology IATA engages with different regulatory bodies i.e. ICAO to advocate the adoption of a global regulatory approach for mitigating carbon emissions from aviation, which does not distort competition among airlines. Furthermore, IATA proposes the implementation of its 4-pillar-strategy that includes 1) investing in technology, 2) improving operational efficiency, 3) building and using efficient infrastructure, and 4) using market-based measures to address climate change. In 2020 ATAG - in cooperation with IATA - has published the Waypoint 2050 Report which has been closely developed with the Airlines like LHG. "Waypoint 2050" describes via manifold assumptions possibilities to become net zero CO_2 emissions in 2050 respectively 2060, which will be very challenging and is only possible with the cooperation of the entire aviation industry and with governmental support and structures. IATA together with ATAG is promoting the Long Term Aspirational Goal for aviation of net zero in 2050 to be included in ICAO strategy. LHG has been for many years and also in 2023 a member within IATAs Sustainability Environment Advisory Council (SEAC) and is chairing IATA's Sustainable Finance Taskforce which has been established in 2022.

Funding figure your organization provided to this organization or individual in the reporting year (currency)

0

Indicate if you have evaluated whether your organization’s engagement is aligned with global environmental treaties or policy goals

☑ Yes, we have evaluated, and it is aligned

Global environmental treaties or policy goals aligned with your organization’s engagement on policy, law or regulation

☑ Paris Agreement

Row 2

Type of indirect engagement

☑ Indirect engagement via a trade association

Trade association

Europe

☑ Other trade association in Europe, please specify **:**Association of German Aviation Industry (BDL)

Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

☑ Climate change

Indicate whether your organization's position is consistent with the organization or individual you engage with

☑ Consistent

Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

☑ Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

The German aviation industry supports the goals of the Paris Climate Agreement and is making an active and ambitious contribution to achieve these goals. With its 2020 "BDL Master plan - climate protection in aviation", the German aviation industry set itself the goal of making flying and airport operations carbon neutral. The master plan identifies the fields where the aviation industry is making progress on climate protection and where it also intends to take further steps together with policymakers: (1) Investments in the use of lower-emission aircraft will result in the modernization of aircraft fleets and a reduction in CO_2 emissions from German aircraft fleets (minus 43% since 1990). (2) Substituting fossil jet fuel with sustainable aviation fuels can lead to significant progress towards achieving carbon-neutral flight operations. (3) By investing in structural and energy modernization at airports and utilizing the corresponding funding programmes, companies will implement carbon neutral airport operations. (4) More efficient air traffic management in European airspace will enable air traffic control service providers to make a further contribution to reducing emissions. (5) Aviation industry companies are working together with the German Aerospace Center (DLR) on ways to reduce non-CO_2 effects of flying (e.g. due to contrails). (6) The aviation industry is working together with policymakers and rail transport companies to ensure that more traffic can be shifted to rail by expanding rail connections and enhancing rail links to airports. (7) The aviation industry supports the instruments of a competitive neutral carbon pricing system which can be used to limit carbon emissions (ETS, CORSIA). These goals and instruments of the industry's master plan are in line with the agreements reached by an alliance of approximately 20 countries, including Germany, at the recent COP26 UN Climate Change Conference for increased internationally coordinated climate protection in aviation. In addition, the German aviation industry's master plan is aligned with the European aviation sector's sustainability initiative ("Destination 2050"), which was unveiled in February 2021.

Funding figure your organization provided to this organization or individual in the reporting year (currency)

0

Indicate if you have evaluated whether your organization’s engagement is aligned with global environmental treaties or policy goals

☑ Yes, we have evaluated, and it is aligned

Global environmental treaties or policy goals aligned with your organization’s engagement on policy, law or regulation

☑ Paris Agreement

Row 3

Type of indirect engagement

☑ Indirect engagement via a trade association

Trade association

Europe

☑ Other trade association in Europe, please specify **:**Airlines for Europe (A4E)

Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

☑ Climate change

Indicate whether your organization’s position is consistent with the organization or individual you engage with

☑ Consistent

Indicate whether your organization attempted to influence the organization or individual’s position in the reporting year

☑ Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

A4E airlines are determined to address the climate challenge that faces all of mankind. By minimizing our environmental impact we can contribute to a more sustainable European economy as envisioned in the European Green Deal. Europe's airlines have committed to decarbonize air transport and accelerate their efforts to make Europe the world's first carbon neutral continent by 2050 through the reduction of CO_2 emissions in absolute terms, and through CO2 mitigation. Acknowledging its responsibilities despite the COVID-19 crisis, in 2021 the EU aviation sector published its "Destination 2050 — A route to net zero European aviation" roadmap showing a clear pathway to reaching net zero CO_2 emissions for intra-European and departing flights by 2050. A4E promotes efforts to include carbon dioxide emissions from aviation in a robust global climate change framework. To be both environmentally effective and economically efficient and to minimize the risk of competitive distortions and carbon leakage, policy action must be taken at a global not national or regional level. A4E initiated and published in 2021 the study "Destination 2050" - a route to net zero aviation done by NRL/SEO with the support and input of its member airlines, ASD (Aerospace and Defence Industries Association of Europe), era (european regions airline association) and canso (civil air navigation services organisation). The aim has been to analyse and identify a possible route to net zero for the European aviation industry to achieve the major climate objective to reach net zero CO_2 emissions by 2050 from all flights within and departing from the EU. A4E with its members has taken also in 2022 an active part within the consultations of the various EU "Fit for 55" policies and directives (i.e. ReFuel EU, EU ETS) as well EASA's EcoLabel initiative. In 2022 A4E was also focusing on the EU Taxonomy directive and its implication for the aviation industry within the EU. Besides taking part in the EU consultation processes with the involvement of the member airlines, A4E also publishes position papers on the various upcoming policies and directives with the engagement of its members.

Funding figure your organization provided to this organization or individual in the reporting year (currency)

0

Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals

☑ Yes, we have evaluated, and it is aligned

Global environmental treaties or policy goals aligned with your organization's engagement on policy, law or regulation

☑ Paris Agreement

(4.12.1) Provide details on the information published about your organization's response to environmental issues for this reporting year in places other than your CDP response. Please attach the publication.

Row 1

Publication

☑ In mainstream reports, in line with environmental disclosure standards or frameworks

Standard or framework the report is in line with

☑ TCFD

Environmental issues covered in publication

☑ Climate change

Status of the publication

☑ Complete

Content elements

☑ Governance
☑ Risks & Opportunities
☑ Strategy
☑ Emissions figures
☑ Emission targets

Page/section reference

1-35

Attach the relevant publication

LH-TCFD-Report-2023.pdf

C5. Business strategy

(5.1) Does your organization use scenario analysis to identify environmental outcomes?

Climate change

Use of scenario analysis

☑ Yes

Frequency of analysis

☑ Every two years

(5.1.1) Provide details of the scenarios used in your organization’s scenario analysis.

Climate change

Scenario used

Climate transition scenarios

☑ IEA STEPS (previously IEA NPS)

Approach to scenario

☑ Qualitative and quantitative

Scenario coverage

☑ Organization-wide

Risk types considered in scenario

☑ Policy
☑ Market
☑ Reputation
☑ Technology
☑ Liability

Temperature alignment of scenario

☑ 2.5ºC - 2.9ºC

Reference year

2019

Timeframes covered

☑ 2030
☑ 2040
☑ 2050

Driving forces in scenario

Stakeholder and customer demands

☑ Consumer sentiment

Regulators, legal and policy regimes

☑ Global targets

☑ Other regulators, legal and policy regimes driving forces, please specify :Rising CO2 prices

Macro and microeconomy

☑ Domestic growth

☑ Other macro and microeconomy driving forces, please specify :Population development, Transport demand, Relative use of different energy sources (renewables vs fossil, SAFs)

Assumptions, uncertainties and constraints in scenario

For transition scenario analysis LHG conduct a qualitative and quantitative scenario analysis (in 2022 and 2023). LHG has considered three contrasting scenarios from the IEA ETP 2020, the - the Sustainable Development Scenario (SDS) - the Stated Policies Scenario (STEP), - the NZE 2050 (only a qualitative analysis conducted for this scenario) The qualitative assessment based on a thorough analysis of the most representative climate scenario indicators for LHG, analyzing the most relevant and available international data sets (by the IEA/NGFS). The used transition tool referring to primarily global (regional when possible) datasets. Where a regional dataset was not available, a global geography was considered. Transition scenario analysis used scenario indicators (proxies) were mapped to each risk and opportunity to understand the significance of the underlying trend for each item. This helped to project how the risk/ opportunity will develop and how LHG's risk exposure may change in the future in the scenarios. Basic macroeconomic factors affecting transport demand like global GDP growth, population developments, the relative use of different energy sources (renewables vs fossil), were also included in the analysis. Likewise, technological assumptions relevant to the quantitative results such as continuous fleet modernization, increasing SAF quotas and CO_2 price development were considered. These scenarios were linked to hot spots defined by the LHG and corresponding parameters of a previously created qualitative scenario heatmap, which have identified transition risks currently as most the relevant risks for the LHG. The LHG's climate goals adopted in 2021 (for 2030 and 2050, with 2019 as the base year) 2040 as further year were defined as time frames for the transition scenarios. Several further internal and external sources were also used (e.g. fuel procurement quantities, the development of the average fuel consumption per tonne kilometre, operational cost structure, sales / revenue volume, assumptions on customer price sensitivity as well as fuel and carbon prices, internal climate/emissions risk assessments), to analyse the effects on passenger as well as on freight transport. By calculating external costs, different impact categories could be compared, and their relative relevance could be assessed. For the risk assessment, no mitigation measures between 2030 and 2050 were considered.

Rationale for choice of scenario

LHG has identified different TCFD aligned scenarios to offer well described and plausible climate scenarios that provide contrasting cases against which to test potential risks, opportunities and impacts on LHG business. In the view of the LHG, the various selected scenarios are most likely to fulfil the requirements for providing answers to the following key questions: - What are the most relevant transition and physical climate risks and opportunities for the LHG by 2030, 2040 and 2050 and which impacts on LHG business could they potentially have? - How do potential impacts vary by climate scenario? - Is the LHG sufficiently well positioned to identify, assess and manage potential risks and opportunities at an early stage and to counter them? - What opportunities exist to respond effectively to these potential impacts and to improve our resilience?

Climate change

Scenario used

Climate transition scenarios

☑ IEA NZE 2050

Approach to scenario

☑ Qualitative and quantitative

Scenario coverage

☑ Organization-wide

Risk types considered in scenario

☑ Policy
☑ Market
☑ Reputation
☑ Technology
☑ Liability

Temperature alignment of scenario

☑ 1.5°C or lower

Reference year

2022

Timeframes covered

☑ 2030
☑ 2040
☑ 2050

Driving forces in scenario

Stakeholder and customer demands

☑ Consumer sentiment

Regulators, legal and policy regimes

☑ Global targets
☑ Other regulators, legal and policy regimes driving forces, please specify **:**Rising CO2 prices

Macro and microeconomy

☑ Domestic growth
☑ Other macro and microeconomy driving forces, please specify **:**Population development, Transport demand, Relative use of different energy sources (renewables vs fossil, SAFs)

Assumptions, uncertainties and constraints in scenario

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relevant risks for the LHG. The LHG's climate goals adopted in 2021 (for 2030 and 2050, with 2019 as the base year) 2040 as further year were defined as time frames for the transition scenarios. Several further internal and external sources were also used (e.g. fuel procurement quantities, the development of the average fuel consumption per tonne kilometre, operational cost structure, sales / revenue volume, assumptions on customer price sensitivity as well as fuel and carbon prices, internal climate/emissions risk assessments), to analyse the effects on passenger as well as on freight transport. By calculating external costs, different impact categories could be compared, and their relative relevance could be assessed. For the risk assessment, no mitigation measures between 2030 and 2050 were considered.

Rationale for choice of scenario

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Climate change

Scenario used

Physical climate scenarios

☑ RCP 2.6

Scenario used SSPs used in conjunction with scenario

☑ SSP1

Approach to scenario

☑ Qualitative

Scenario coverage

☑ Organization-wide

Risk types considered in scenario

☑ Acute physical
☑ Chronic physical

Temperature alignment of scenario

☑ 1.6ºC - 1.9ºC

Reference year

2022

Timeframes covered

☑ 2030
☑ 2050

Driving forces in scenario

Stakeholder and customer demands

☑ Consumer sentiment
☑ Consumer attention to impact

Relevant technology and science

☑ Granularity of available data (from aggregated to local)

Direct interaction with climate

☑ On asset values, on the corporate

Assumptions, uncertainties and constraints in scenario

LHG used physical climate scenario data from the IPCC AR6 report to assess potential changes in physical risks over time (Baseline, 2030, 2050) under low (SSP1-2.6) and high (SSP5-8.5) emissions pathways. The inputs, processes and methodologies of the physical scenario analysis are based on a certain number of assumptions and limitations. Therefore, the interpretation of the results of this analysis needs to be considered alongside these circumstances. The analysis considers acute events like floods and storms and chronic changes such as shifts in average temperatures. An exposure screening of the 28 climate hazards of the EU Taxonomy was carried out and then the hazards classified as potentially most relevant from the project group's perspective were examined for their potential impact on the LHGs business activities. A total of 25 locations were identified for the scenario analysis, 20 physical point locations, including airports, hubs, suppliers, and maintenance facilities and 5 regions which included major routes. These covered all aspects of LHG's value chain. The main identified physical CRRO were assessed against the scenarios and time horizons, combing global scenario data for assets with LHGs specific data. Limitations: 1. This is a high-level assessment for LHG; it represents the potential level of climate risk or opportunity and requires further assessment at a local level to validate the level of risk for specific sites / business segments. 2. This assessment uses modelled global climate hazard datasets and therefore may not be fully representative of the local hazard conditions. 3. The site level assessment of physical risk results are based upon one point location and one hazard indicator to assess each climate hazard, there is therefore a limitation on assessing the different drivers of a physical climate hazard. 4. The regional level assessment of larger-scale physical hazard trend results is based on analysis of peer-reviewed literature to assess the relevant scenario trends across a region (e.g., a continent or country), and therefore should be considered as overall directional trend within the area rather than specific local hazard conditions. 5. The physical risk results follow the standard approach used by the main climate risk models, whereby the results are specific to each climate hazard and do not consider risk interconnectivity (e.g., between extreme heat and wildfires), each hazard is analysed separately.

Rationale for choice of scenario

LHG has identified different TCFD aligned scenarios to offer well described and plausible climate scenarios that provide contrasting cases against which to test potential risks, opportunities and impacts on LHG business. In the view of the LHG, the various selected scenarios are most likely to fulfil the requirements for providing answers to the following key questions: - What are the most relevant transition and physical climate risks and opportunities for the LHG by 2030, 2040 and 2050 and which impacts on LHG business could they potentially have? - How do potential impacts vary by climate scenario? - Is the LHG sufficiently well positioned to identify, assess and manage potential risks and opportunities at an early stage and to counter them? - What opportunities exist to respond effectively to these potential impacts and to improve our resilience?

Climate change

Scenario used

Physical climate scenarios

☑ RCP 8.5

Scenario used SSPs used in conjunction with scenario

☑ SSP5

Approach to scenario

☑ Qualitative

Scenario coverage

☑ Organization-wide

Risk types considered in scenario

☑ Acute physical

☑ Chronic physical

Temperature alignment of scenario

☑ 4.0°C and above

Reference year

2022

Timeframes covered

☑ 2030
☑ 2050

Driving forces in scenario

Stakeholder and customer demands

☑ Consumer sentiment
☑ Consumer attention to impact

Relevant technology and science

☑ Granularity of available data (from aggregated to local)

Direct interaction with climate

☑ On asset values, on the corporate

Assumptions, uncertainties and constraints in scenario

LHG used physical climate scenario data from the IPCC AR6 report to assess potential changes in physical risks over time (Baseline, 2030, 2050) under low (SSP1-2.6) and high (SSP5-8.5) emissions pathways. The inputs, processes and methodologies of the physical scenario analysis are based on a certain number of assumptions and limitations. Therefore, the interpretation of the results of this analysis needs to be considered alongside these circumstances. The analysis considers acute events like floods and storms and chronic changes such as shifts in average temperatures. An exposure screening of the 28 climate hazards of the EU Taxonomy was carried out and then the hazards classified as potentially most relevant from the project group's perspective were examined for their potential impact on the LHGs business activities. A total of 25 locations were identified for the scenario analysis, 20 physical point locations, including airports, hubs, suppliers, and maintenance facilities and 5 regions which included major routes. These covered all aspects of LHG's value chain. The main identified physical CRRO were assessed against the scenarios and time horizons, combing global scenario data for assets with LHGs specific data. Limitations: 1. This is a high-level assessment for LHG; it represents the potential level of climate risk or opportunity and requires further assessment at a local level to validate the level of risk for specific sites / business segments. 2. This assessment uses modelled global climate hazard datasets and therefore may not be fully representative of the local hazard conditions. 3. The site level assessment of physical risk results are based upon one point location and one hazard indicator to assess each climate hazard, there is therefore a limitation on assessing the different drivers of a physical climate hazard. 4. The regional level assessment of larger-scale physical hazard trend results is based on analysis of peer-reviewed literature to assess the relevant scenario trends across a region (e.g., a continent or country), and therefore should be considered as overall directional trend within the area rather than specific local hazard conditions. 5. The physical risk results follow the standard approach used by the main climate

risk models, whereby the results are specific to each climate hazard and do not consider risk interconnectivity (e.g., between extreme heat and wildfires), each hazard is analysed separately.

Rationale for choice of scenario

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Climate change

Scenario used

Climate transition scenarios

☑ IEA SDS

Approach to scenario

☑ Qualitative and quantitative

Scenario coverage

☑ Organization-wide

Risk types considered in scenario

☑ Policy

☑ Market

☑ Reputation

☑ Technology

☑ Liability

Temperature alignment of scenario

☑ 1.6ºC - 1.9ºC

Reference year

2019

Timeframes covered

☑ 2030
☑ 2040
☑ 2050

Driving forces in scenario

Stakeholder and customer demands

☑ Consumer sentiment

Regulators, legal and policy regimes

☑ Global targets

☑ Other regulators, legal and policy regimes driving forces, please specify **:**Rising CO2 prices

Macro and microeconomy

☑ Domestic growth

☑ Other macro and microeconomy driving forces, please specify **:**Population development, Transport demand, Relative use of energy sources (renewables vs fossil, SFAs)

Assumptions, uncertainties and constraints in scenario

For transition scenario analysis LHG conduct a qualitative and quantitative scenario analysis (in 2022 and 2023). LHG has considered three contrasting scenarios from the IEA ETP 2020, the - the Sustainable Development Scenario (SDS) - the Stated Policies Scenario (STEP), - the NZE 2050 (only a qualitative analysis

conducted for this scenario) The qualitative assessment based on a thorough analysis of the most representative climate scenario indicators for LHG, analyzing the most relevant and available international data sets (by the IEA/NGFS). The used transition tool referring to primarily global (regional when possible) datasets. Where a regional dataset was not available, a global geography was considered. Transition scenario analysis used scenario indicators (proxies) were mapped to each risk and opportunity to understand the significance of the underlying trend for each item. This helped to project how the risk/ opportunity will develop and how LHG's risk exposure may change in the future in the scenarios. Basic macroeconomic factors affecting transport demand like global GDP growth, population developments, the relative use of different energy sources (renewables vs fossil), were also included in the analysis. Likewise, technological assumptions relevant to the quantitative results such as continuous fleet modernization, increasing SAF quotas and CO_2 price development were considered. These scenarios were linked to hot spots defined by the LHG and corresponding parameters of a previously created qualitative scenario heatmap, which have identified transition risks currently as most the relevant risks for the LHG. The LHG's climate goals adopted in 2021 (for 2030 and 2050, with 2019 as the base year) 2040 as further year were defined as time frames for the transition scenarios. Several further internal and external sources were also used (e.g. fuel procurement quantities, the development of the average fuel consumption per tonne kilometre, operational cost structure, sales / revenue volume, assumptions on customer price sensitivity as well as fuel and carbon prices, internal climate/emissions risk assessments), to analyse the effects on passenger as well as on freight transport. By calculating external costs, different impact categories could be compared, and their relative relevance could be assessed. For the risk assessment, no mitigation measures between 2030 and 2050 were considered.

Rationale for choice of scenario

LHG has identified different TCFD aligned scenarios to offer well described and plausible climate scenarios that provide contrasting cases against which to test potential risks, opportunities and impacts on LHG business. In the view of the LHG, the various selected scenarios are most likely to fulfil the requirements for providing answers to the following key questions: - What are the most relevant transition and physical climate risks and opportunities for the LHG by 2030, 2040 and 2050 and which impacts on LHG business could they potentially have? - How do potential impacts vary by climate scenario? - Is the LHG sufficiently well positioned to identify, assess and manage potential risks and opportunities at an early stage and to counter them? - What opportunities exist to respond effectively to these potential impacts and to improve our resilience?

(5.1.2) Provide details of the outcomes of your organization's scenario analysis.

Climate change

Business processes influenced by your analysis of the reported scenarios

☑ Risk and opportunities identification, assessment and management

☑ Strategy and financial planning

☑ Resilience of business model and strategy

Coverage of analysis

☑ Organization-wide

Summarize the outcomes of the scenario analysis and any implications for other environmental issues

The results described here reflect the scenario analyses carried out in 2021/2022 and 2023. The scenario analyses have shown that transition climate risks and especially the carbon and SAF/fuel price development are the dominant cost driver in all time horizons considered (2030, 2040, 2050). In the SDS (1.8C) scenario, which is based on an ambitious decarbonisation pathway, the costs associated with this decarbonisation increase significantly by 2050. However, assuming no regulatory interference in market pricing, oil prices decrease because of lower general market demand in this scenario. SAF shares increase to almost 50% by 2050. In sum, these effects could lead to only a slight increase in OPEX in the medium-term for the passenger fleet of the LHG. The long-term effects on OPEX are remaining insignificant. In the STEP (2.7C) scenario, CO_2 prices rise more slowly. However, higher demand for crude oil in this scenario means that fuel costs increase potentially inducing a significant increase in OPEX both in the medium and long term. In both scenarios, the global demand for passenger transportation volume increases with global population and economic growth (especially in economically developing regions). In this model a homogeneous implementation of CO_2 prices across regions and sectors was assumed. The risks related to regional differences in policy approaches and the related distortion of competition therefore exists and should be examined more closely in a further analysis. With regard to the quantitative impacts of changing transportation markets resulting from shifting demand patterns and subsidy structures, both climate scenarios show an increase in demand for passenger transportation. In the 2.7C scenario, less emphasis is put on the extension of regional rail networks and subsidy structures for alternatives to air transport compared to the 1.8C scenario. Thus, higher demand increase can be expected in the 2.7C scenario. It has also shown that LHG's current strategy already reflects many of these findings with climate-related issues affecting its products and services, its value chain, investments in R&D, and its operations. The results of these scenario analysis confirm that LHG's strategic initiatives are suitable to potentially minimize the respective transition risks and to pursue climate opportunities. Regarding the physical climate risks, it has been shown that for the most part these can only have a material impact on the LHG's business selectively and, above all, in the long term (2040/2050). To assess and, above all, quantify the identified potential effects of physical climate change (but also transitional effects) even more precisely and to increase LHG's resilience to long-term climate risks, it is planned to supplement the qualitative scenario analysis of physical risk with a quantitative assessment of the identified material climate risks. In addition, Lufthansa Group is currently preparing for the future legal requirements of the Corporate Sustainability Reporting Directive (CSRD). As this directive will have a fundamental impact on the interaction of risk management, financial planning and climate impact, the findings from the scenario analysis will be incorporated there.

(5.2) Does your organization's strategy include a climate transition plan?

Transition plan

☑ Yes, we have a climate transition plan which aligns with a 1.5°C world

Publicly available climate transition plan

☑ Yes

Plan explicitly commits to cease all spending on, and revenue generation from, activities that contribute to fossil fuel expansion

☑ No, and we do not plan to add an explicit commitment within the next two years

Explain why your organization does not explicitly commit to cease all spending on and revenue generation from activities that contribute to fossil fuel expansion

LHG does not commit to ceasing all spending on and revenue generation from activities that contribute to fossil fuel expansion for several reasons: 1. Dependency on Fossil Fuels: The aviation industry currently relies heavily on fossil fuels, particularly jet fuel. The technology and infrastructure needed to transition completely away from fossil fuels are not yet widely available or economically feasible for airlines. This dependency means LHG continue to need access to fossil fuels to operate their fleets and maintain their services. 2. Lack of Alternatives: Sustainable aviation fuels (SAFs) and electric or hydrogen-powered aircraft are still in development and not yet available at scale. SAFs are much more expensive and less accessible than traditional jet fuel and electric or hydrogen-powered aircraft are still in developmental stages with limited capacity and range., limiting LHG's options for replacing all fossil fuels in the medium to long term.This fact is also recognised by SBTi and taken into account in the SBTI target requirements for the aviation sector. 3. Infrastructure and Supply Chain: The entire aviation infrastructure, such as airports and refueling stations, is built around fossil fuels. Transitioning away would require a massive and costly overhaul. 4. Economic Viability: Stopping all fossil fuel-related activities would likely be economically unviable for LHG and most airlines. The aviation industry is a highly competitive and low-margin industry. Sudden changes that increase costs or reduce operational capabilities could threaten an airline's financial stability and competitiveness. 5. Customer and Market Demand: The demand for flights powered by conventional jet fuel remains high. Stopping fossil fuel-related activities could lead to losing a significant portion of the customer base. 6. Regulatory and Policy Constraints: Current regulations and standards are based on fossil fuel use. Without a coordinated global effort and new regulatory frameworks, supporting a shift away from fossil fuels, LHG will continue operating within existing guidelines that include fossil fuels. 7. Long-Term Transition: While LHG as well as many airlines are committed to reducing their carbon footprints and exploring alternative fuels and technologies, the transition to a fossil-free future is likely to be gradual. LHG therefore set interim targets and gradually reduce their fossil fuel dependency as technology and infrastructure evolve.

Mechanism by which feedback is collected from shareholders on your climate transition plan

☑ We have a different feedback mechanism in place

Description of feedback mechanism

The LHG net zero target for 2050 is consistent with 1.5C and the Paris Agreement. The carbon intensity target for 2030 is aligned with the "well below 2C" target and verified by the SBTi. The LHG Executive Board and Supervisory Board approved these targets in 2021 and the corresponding LHG transition plan and are regularly informed about the current implementation status. In addition, LHG maintains an ongoing dialogue with its shareholders, politicians and other stakeholders to discuss the goals and measures taken. Where appropriate, updates on sustainability are included in the Group's quarterly results presentations and published on the Lufthansa Group's Web pages. In 2022, LHG was the first airline group in Europe whose reduction targets were verified by SBTi.

Frequency of feedback collection

☑ More frequently than annually

Description of key assumptions and dependencies on which the transition plan relies

The transition plan depends on the future business development, particularly the RTK growth. Being the main mitigation lever, the fleet renewal, i.e. the delivery schedule of new aircraft, also has a significant impact (unplanned delivery delays increased in the recent years). The fleet plan currently only includes conventional (kerosene-fueled) aircraft. The SAF uplift will in part be driven by EU regulation (SAF mandates), however to meet the targets additional voluntary uplift will be required. For this purpose, LHG has developed a broad sustainable product portfolio. The customer involvement will be crucial – not only to recover the expenses for SAF, but also to maintain or increase the load factor. A designated program currently assesses options to finance the transition.

Description of progress against transition plan disclosed in current or previous reporting period

The main contributor to the reductions until 2030 will be fleet renewal. In the past, the forecast of future aircraft performance (fuel consumption) proved to be rather accurate, therefore the confidence is high that the expected contribution to reduce the CO2 intensity will actually materialize. In terms of operations, the retrofit Aeroshark has proven to save about 1% of fuel and will be successively applied to an increasing number of aircraft in the fleet. The volume of mitigation from SAF could also be increased continuously and will further increase in the future depending on the success of the green product portfolio. The currently greatest threat to our sustainability strategy are the geopolitical conflicts: Flights to Asia now avoid the Russian airspace, thereby prolonging flights by hours unnecessariliy increasing fuel consumption. This effect has compensated a significant part of our recent efficiency gains from new aircraft and improved operations.

Other environmental issues that your climate transition plan considers

☑ No other environmental issue considered

(5.3) Have environmental risks and opportunities affected your strategy and/or financial planning?

Environmental risks and/or opportunities have affected your strategy and/or financial planning

☑ Yes, both strategy and financial planning

Business areas where environmental risks and/or opportunities have affected your strategy

☑ Products and services
☑ Upstream/downstream value chain
☑ Investment in R&D
☑ Operations

(5.3.1) Describe where and how environmental risks and opportunities have affected your strategy.

Products and services

Effect type

☑ Risks

Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

☑ Climate change

Describe how environmental risks and/or opportunities have affected your strategy in this area

The Lufthansa Group takes into account the climate-related risks and opportunities defined as material both when drawing up or revising its corporate strategy, and in its regular financial planning. Important corporate decisions are always made in consideration of the effects on the Lufthansa Group's emissions balance sheet and potential climate risks & opportunities. With regard to our product an services this includes the fleet strategy in relation to the purchase of new (next generation) aircraft or the retirement of older aircraft, as well as the strategic corporate decision on continuously expanding its services and offerings for more sustainable flight options. Its Green Fares are worth highlighting in particular regarding the reporting year. In mid-February 2023, these Green Fares made the Lufthansa Group the first

airline group in the world to offer a separate fare which includes compensation of flight-related carbon emissions. In addition, new technologies for long-term binding of CO2 were added to the Group's portfolio of offset projects in 2023.

Upstream/downstream value chain

Effect type

☑ Risks

Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

☑ Climate change

Describe how environmental risks and/or opportunities have affected your strategy in this area

The Lufthansa Group takes into account the climate-related risks and opportunities defined as material both when drawing up or revising its corporate strategy, and in its regular financial planning. Important corporate decisions are always made in consideration of the effects on the Lufthansa Group's emissions balance sheet and potential climate risks & opportunities. With reference to the upstream/downstream value chain, the activities of LHGs suppliers could pose risks in terms of new climate-related regulations, which affect their costs in the next 1-5 years. It could also have impact on LHGs access to capital, if investors begin to allocate funds on the basis of which companies are reducing their scope 1-3 emissions. For these reasons, among others, the LHG increasingly considers the entire value chain of its business activities. The following are some important strategic decisions in the reporting year with focus on supply chain: - Implement a new "Supplier Code of conduct" with ESG focus, - Use of an IT application which is designed to make it possible to identify potential human rights- and environment-related risks and violations (appropriate and effective risk mapping) for the centrally managed suppliers. In addition, an AI-supported web screening is carried out for suppliers who have a certain risk score in the risk management system. This involves checking social media and news to see whether and what reports there are about the individual suppliers. Further information such as self-disclosures, known negative human rights or environmental incidents and LHG spend versus supplier revenue influence the mapping (360 degree risk score) of the suppliers. 100% of centrally managed direct suppliers has been mapped. - Implementation of an IT-tool that will be used to calculate the Scope 3 emissions of the various purchased products and services of suppliers based on the purchase value.

Investment in R&D

Effect type

☑ Opportunities

Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

☑ Climate change

Describe how environmental risks and/or opportunities have affected your strategy in this area

The Lufthansa Group takes into account the climate-related risks and opportunities defined as material both when drawing up or revising its corporate strategy, and in its regular financial planning. Important corporate decisions are always made in consideration of the effects on the Lufthansa Group's emissions balance sheet and potential climate risks & opportunities. Innovation and R&D will be crucial to our decarbonisation efforts over a timeframe to 2050. Investments in R&D and the ability to use SAF and new technologies, will reduce the climate related risks (e.g. compliance cost under existing and emerging climate regulations) and increases the chance to reach competitive advantage. The following are some important strategic decisions with focus on investment in R&D and innovation: - LHG is involved in various SAF projects and alliances and looks globally for sourcing opportunities. Some examples: o LHG closed a LoI with Heide refinery to support the development of Power-to-liquid (PtL) technology for sustainable jet fuel. Heide refinery shall supply LHG with SAF from 2024 of 5% for LHG flights from Hamburg. o SWISS has invested in Synhelion company to helping accelerate the process of bringing solar fuels to market. - LHG is partnering with universities (e.g. KIT, RWTH Aachen) and research institutes (e.g. DLR) in climate research projects. For more than 20 years LHG aircraft has been collecting data for research projects (e.g. IAGOS, CARIBIC) to better understand climate change. - Lufthansa Technik cooperates with BASF Coatings GmbH and Airbus to develop a film that resembles the structure of Sharks Skin as their microstructure reduces the frictional resistance which can save up to 3% of fuel. SWISS and Lufthansa Cargo have adopt the coating on its aircrafts as launching “customers” in 2023. - in 2022 Lufthansa Technik presented its Hydrogen Aviation Lab, Hamburg’s new functional laboratory for the testing of maintenance and ground processes for future hydrogen-powered aircraft.

Operations

Effect type

☑ Risks

Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

☑ Climate change

Describe how environmental risks and/or opportunities have affected your strategy in this area

Jet Fuel emissions represent 99 % of LHG Scope 1 & 2 emissions. Climate-related regulatory risks lead to increasing compliance costs (e.g. EU Allowance's price of CO_2 at EU ETS has increased from around 25 in 2019 to around 85/t in average in 2023. A further tightening of the EU ETS regulation is to be expected (e.g. decreasing of free allowances) and thus further increase of the operational costs for LHG. Besides this, the climate targets of LHG until 2030 and 2050 are based, among other things, on continuous efficiency improvements of the operation. Efficient flight operation e.g. by intelligent route planning, modern approach procedures, weight reduction or the operation of innovative technology, helps to reduce costs, to reach climate targets and therefore also offer the opportunity of a competitive advantage and thus influence LHG strategy. The following are some important strategic decisions within the LHG with focus on operations: In reporting year 2023, 67 fuel-saving projects were under way across the Group. These projects comprise activities relating to performance and procedures, weight reduction, flight route optimisation and technical developments. This enabled another 25 thousand tonnes of CO_2 emissions permanently to be eliminated in 2023.

(5.3.2) Describe where and how environmental risks and opportunities have affected your financial planning.

Row 1

Financial planning elements that have been affected

☑ Revenues
☑ Liabilities
☑ Direct costs
☑ Indirect costs
☑ Access to capital
☑ Capital allocation
☑ Capital expenditures

Effect type

☑ Risks
☑ Opportunities

Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

☑ Climate change

Describe how environmental risks and/or opportunities have affected these financial planning elements

LHG financial planning has been influenced by climate-related regulatory risk as well as by climate-related opportunities by creating availability of sustainable energy source. The risk of (cost) increasing climate-related regulation like carbon pricing, energy efficiency standards as well as aviation and eventually fuel taxes influenced the financial planning within Capital Expenditures for new, more fuel efficient aircrafts with lower operational costs than older less efficient aircraft and at the same time to reduce CO2 emissions up to 25. Approximately 32% of LHG's CO_2 emissions occur from flights within the European Economic Area (EEA), being subject to the EU ETS, with rising cost per tonne CO2 and the free allowances to be reduced to zero until latest 2030. Additional tightening is being sought through the EU 'Fitfor55' package. In financial planning, the possible costs for emission certificates and fuel are usually calculated and taken into account for a period of 3 years. Fleet renewal is currently the key driver for reducing CO_2 emissions from flight operations. Lufthansa Group continuously invests in modern, fuel-efficient aircraft and engine technologies, Financial planning has also been influenced by Lufthansa Group's Sustainable Aviation Fuel (SAF) strategy. SAF poses a climate-related regulatory risk with the ReFuel EU directive, imposing mandatory SAF quota within the EU from 2025 onwards as SAF is up to 5 times more expensive than conventional fuels. This may lead to a potential competitive distortion for intra EU flights. The mandate could be also an opportunity for producing more availability of sustainable energy source and possibly contributes to higher customer retention or acquisition and thus better revenues. Lufthansa Cargo customers have also been able to transport their freight in a carbon-neutral manner since September 2021. Further examples of financial planning which has been influenced by climate-related risks and opportunities: CAPITAL ALLOCATION - Funds for voluntary CO_2 compensation: Financial funds have been provided to compensate CO_2 on a voluntary basis: All LHG employees duty flights are 100% compensated since 2019. - Funds for Green electricity: Financial funds have been provided to use 100% green electricity in Germany, Austria, Switzerland and Belgium - the opportunity to reduce fuel consumption and emissions has made aircraft investments comparably more attractive than other investments and alternative options to

(5.4) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Methodology or framework used to assess alignment with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
	☑ Yes	☑ A sustainable finance taxonomy	☑ At both the organization and activity level

(5.4.1) Quantify the amount and percentage share of your spending/revenue that is aligned with your organization's climate transition.

Row 1

(5.4.1.1) Methodology or framework used to assess alignment

☑ A sustainable finance taxonomy

(5.4.1.2) Taxonomy under which information is being reported

☑ EU Taxonomy for Sustainable Activities

(5.4.1.3) Objective under which alignment is being reported

☑ Climate change mitigation

(5.4.1.4) Indicate whether you are reporting eligibility information for the selected objective

☑ Yes

(5.4.1.5) Financial metric

☑ Revenue/Turnover

(5.4.1.6) Amount of selected financial metric that is aligned in the reporting year (currency)

34176000000

(5.4.1.7) Percentage share of selected financial metric aligned in the reporting year (%)

0

(5.4.1.8) Percentage share of selected financial metric planned to align in 2025 (%)

0

(5.4.1.9) Percentage share of selected financial metric planned to align in 2030 (%)

0

(5.4.1.10) Percentage share of financial metric that is taxonomy-eligible in the reporting year (%)

96

(5.4.1.11) Percentage share of financial metric that is taxonomy non-eligible in the reporting year (%)

4

(5.4.1.12) Details of the methodology or framework used to assess alignment with your organization’s climate transition

The EU taxonomy on sustainable finance helps us to assess alignment with our organization's climate transition in several ways: 1. Standardized framework: The taxonomy provides a standardized framework for classifying sustainable economic activities throughout the LHG. 2. Clear criteria: The taxonomy provides a clear set of criteria for economic activities that contribute to climate change mitigation. This can help LHG to assess whether activities and investments are aligned with climate transition. 3. Risk assessment: The taxonomy supports identification and assessment of climate-related risks and opportunities, allowing LHG to make more informed decisions and better manage its transition to a low-carbon economy. Overall, the EU taxonomy provides a valuable tool for LHG to assess and demonstrate its alignment with climate goals, while also helping to drive the broader transition to a sustainable and low-carbon economy.

(5.4.2) Quantify the percentage share of your spending/revenue that was associated with eligible and aligned activities under the sustainable finance taxonomy in the reporting year.

Row 1

Economic activity

☑ Acquisition and ownership of buildings

Taxonomy under which information is being reported

☑ EU Taxonomy for Sustainable Activities

Taxonomy alignment

☑ Taxonomy-eligible but not aligned

Financial metrics

☑ CAPEX
☑ OPEX

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (currency)

236000000

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year

5

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (currency)

158000000

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year

6

Calculation methodology and supporting information

The share of revenue, CapEx and OpEx accounted for by the identified economic activities in relation to the overall activities of the Group was determined in accordance with the requirements of the EU Taxonomy. (In line with the consolidated income statement, and therefore only relates to fully consolidated entities).

Substantial contribution criteria met

☑ No

Details of substantial contribution criteria analysis

Own buildings do not meet TSC requirements

Do no significant harm requirements met

☑ No

Details of do no significant harm analysis

No DNSH-analysis has been conducted since TSC for alignment were not fulfilled.

Minimum safeguards compliance requirements met

☑ Yes

Row 2

Economic activity

☑ Manufacturing of aircraft

Taxonomy under which information is being reported

☑ EU Taxonomy for Sustainable Activities

Taxonomy alignment

☑ Taxonomy-eligible, alignment not assessed

Financial metrics

☑ Turnover
☑ CAPEX
☑ OPEX

Taxonomy-eligible, alignment not assessed turnover from this activity as % of total turnover in reporting year

12

Taxonomy-eligible, alignment not assessed CAPEX associated with this activity as % of total CAPEX in the reporting year

2

Taxonomy-eligible, alignment not assessed OPEX with this activity as % of total OPEX in the reporting year

2

Calculation methodology and supporting information

The share of revenue, CapEx and OpEx accounted for by the identified economic activities in relation to the overall activities of the Group was determined in accordance with the requirements of the EU Taxonomy. (In line with the consolidated income statement, and therefore only relates to fully consolidated entities). Revenue is defined as net sales in accordance with IFRS (International Financial Reporting Standards), as shown in the consolidated income statement.

Row 3

Economic activity

☑ Passenger and freight air transport

Taxonomy under which information is being reported

☑ EU Taxonomy for Sustainable Activities

Taxonomy alignment

☑ Taxonomy-eligible, alignment not assessed

Financial metrics

☑ Turnover
☑ CAPEX
☑ OPEX

Taxonomy-eligible, alignment not assessed turnover from this activity as % of total turnover in reporting year

84

Taxonomy-eligible, alignment not assessed CAPEX associated with this activity as % of total CAPEX in the reporting year

88

Taxonomy-eligible, alignment not assessed OPEX with this activity as % of total OPEX in the reporting year

91

Calculation methodology and supporting information

The share of revenue, CapEx and OpEx accounted for by the identified economic activities in relation to the overall activities of the Group was determined in accordance with the requirements of the EU Taxonomy. (In line with the consolidated income statement, and therefore only relates to fully consolidated entities). Revenue is defined as net sales in accordance with IFRS (International Financial Reporting Standards), as shown in the consolidated income statement.

(5.4.3) Provide any additional contextual and/or verification/assurance information relevant to your organization's taxonomy alignment.

	Indicate whether you will be providing verification/assurance information relevant to your taxonomy alignment in question 13.1
	☑ Yes

(5.5) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
	☑ Yes	*LH Group invests in low-carbon R&D*

(5.5.8) Provide details of your organization's investments in low-carbon R&D for transport-related activities over the last three years.

Row 1

Activity

☑ Aviation

Technology area

☑ Aerodynamics

Stage of development in the reporting year

☑ Full/commercial-scale demonstration

Average % of total R&D investment over the last 3 years

6

Average % of total R&D investment planned over the next 5 years

11.2

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

The research, development and implementation of operational efficiency measures to reduce fuel consumption and related GHG emissions of LHG's aircraft fleet is a main pillar of LHGs climate transition plan. AeroSHARK is a drag-reducing and hence fuel-saving surface technology jointly developed by Lufthansa Technik and BASF. Its successful proof of concept on a single Lufthansathe Boeing 747-400 in 2019 was in recent years succeeded by an even larger AeroSHARK riblet film modification developed and subsequently certified for two subtypes of Boeing 777,. For this development stage, Lufthansa Technik achieved EASA (and later FAA) supplemental type certification in December 2022, paving the way for the 777-first subfleet-wide roll-out of the AeroSHARK technology at the launch customers SWISS and Lufthansa Cargo within the Lufthansa Group. With up to 950 square meters of riblet film applied to the aircraft's fuselage and engine nacelles, this AeroSHARK modification is estimated to make both the 777F of Lufthansa Cargo and the 777-300ER of SWISS around one percent more fuel-efficient. 2023 marked the year in which this roll-out of the technology at launch customers SWISS and Lufthansa Cargo has significantly gained momentum. In the course of the year, a total of 15 Boeing 777s have been successfully modified with AeroSHARK. With up to 950 square meters of riblet film applied to the aircraft's fuselage and engine nacelles, this current AeroSHARK modification has practically demonstrated that it makes both the 777F of Lufthansa Cargo and the 777-300ER of SWISS around one percent more fuel-efficient. As soon as the combined Boeing 777 fleets at Lufthansa Cargo and SWISS are fully modified, AeroSHARK will already hence reduce the Lufthansa Group's carbon footprint by more than 25,000 tons of CO2 every year. Moreover, at Lufthansa Technik, plans persist to have the energy-saving riblet films certified for further aircraft types and additional aircraft surfaces, promoting it more widely across aircraft operators around the world. Therefore, Lufthansa Technik also plans to make the fuel-saving film available to airlines outside the Lufthansa Group.

Row 2

Activity

☑ Aviation

Technology area

☑ Operations

Stage of development in the reporting year

☑ Applied research and development

Average % of total R&D investment over the last 3 years

2.8

Average % of total R&D investment planned over the next 5 years

3

(5.5.8.7) Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

The research, development and implementation of operational efficiency measures to reduce fuel consumption and related GHG emissions of LHG's aircraft fleet is a main pillar of LHGs climate transition plan. The VOLAR project and product enhancements established an innovative algorithm which offers a synchronized route optimization for diverse criteria (kerosene, costs, time, climate effects). Therefor this R&D investment is fully aligned with LHGs climate transition plan. VOLAR is a development project for our Lufthansa Systems product LIDO Flight 4D. The project is ongoing and has the aim to reduce CO2 through smart mathematics. Based on the flight planning software Lido Flight 4D, the expansion of the new Lido Optimizer VOLAR Algorithm followed and enables the optimization of routes to avoid non-CO2 effects such as condensation trails through the usage of eco-efficient trajectories.

Row 3

Activity

☑ Aviation

Technology area

☑ Operations

Stage of development in the reporting year

☑ Small scale commercial deployment

Average % of total R&D investment over the last 3 years

0.4

Average % of total R&D investment planned over the next 5 years

3.1

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

The research, development and implementation of operational efficiency measures to reduce fuel consumption and related GHG emissions of LHG's aircraft fleet is a main pillar of LHGs climate transition plan. The In-Flight Optimization product enhancements established an innovative algorithm which offers a real-time route optimization for diverse criteria (kerosene, costs, time, climate effects). Therefor this R&D investment is fully aligned with LHGs climate transition plan. The In-Flight Optimization development is a product enhancement for our Lufthansa Systems Product LIDO Pilot Apps and has been started in 2023. Based on flight trajectories planned by the planning software LIDO Flight 4D, the development has the aim to use real-time weather information and uses our existing flight planning optimizer to recalculate the route when weather changes occur and propose adjusted vertical flight profile to reduce C02 Emissions and other optimization parameters like costs or time. The project is currently in a testing phase and will continue for the next years.

(5.10) Does your organization use an internal price on environmental externalities?

	Use of internal pricing of environmental externalities	Environmental externality priced
	☑ Yes	☑ Carbon

(5.10.1) Provide details of your organization’s internal price on carbon.

Row 1

Type of pricing scheme

☑ Shadow price

Objectives for implementing internal price

☑ Drive energy efficiency
☑ Drive low-carbon investment
☑ Navigate regulations
☑ Other, please specify **:**Meet stakeholder expectations

Factors considered when determining the price

☑ Alignment with the price of allowances under an Emissions Trading Scheme
☑ Price/cost of voluntary carbon offset credits

Calculation methodology and assumptions made in determining the price

To determining the internal price of carbon LHG use market-based approaches and utilize prices from existing carbon markets (e.g., EU Emissions Trading System, CORSIA). Assumptions and methodology use for calculation:
- Current market price reflects the equilibrium between supply and demand for carbon allowances.
- Future price trends based on regulatory changes, market dynamics, and technological advancements.
- Take the weighted average of carbon prices over a specific period.
- Adjust prices for expected future changes and market volatility.

Scopes covered

☑ Scope 1
☑ Scope 2

Pricing approach used – spatial variance

☑ Uniform

Pricing approach used – temporal variance

☑ Evolutionary

Indicate how you expect the price to change over time

Rising

Minimum actual price used (currency per metric ton CO2e)

5

Maximum actual price used (currency per metric ton CO2e)

125

Business decision-making processes the internal price is applied to

☑ Capital expenditure
☑ Operations
☑ Procurement

Internal price is mandatory within business decision-making processes

☑ Yes, for some decision-making processes, please specify**:** For example in profitability calculations for aircraft procurement or network strategy and planning , LHG always use a CO2 surcharge in the assumptions on the future fuel price.

% total emissions in the reporting year in selected scopes this internal price covers

90

Pricing approach is monitored and evaluated to achieve objectives

☑ Yes

Details of how the pricing approach is monitored and evaluated to achieve your objectives

LH Group best approach focusses to compare third-party traded prices for emission-units depending on the relevant air transport markets (e.g. CORSIA or EU-ETS). In cases where third-party traded prices are not available, relevant experts are consulted. This process is carried out at least on an annual basis.

(5.11) Do you engage with your value chain on environmental issues?

	Engaging with this stakeholder on environmental issues	Environmental issues covered
Suppliers	☑ Yes	☑ Climate change
Customers	☑ Yes	☑ Climate change ☑ Plastics
Investors and shareholders	☑ Yes	☑ Climate change
Other value chain stakeholders	☑ Yes	☑ Climate change

(5.11.1) Does your organization assess and classify suppliers according to their dependencies and/or impacts on the environment?

Climate change

Assessment of supplier dependencies and/or impacts on the environment

☑ Yes, we assess the dependencies and/or impacts of our suppliers

Criteria for assessing supplier dependencies and/or impacts on the environment

☑ Contribution to supplier-related Scope 3 emissions
☑ Dependence on ecosystem services/environmental assets
☑ Impact on plastic waste and pollution
☑ Impact on pollution levels
☑ Other, please specify**:** Chemical Leakage, Land conflict, Mineral conflict, Persistent organic pollutants, Toxication

% Tier 1 suppliers assessed

☑ 100%

Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment

To classify suppliers LHG uses an AI based tool. Suppliers are evaluated based on risks. To determine substantive impact, LHG consider a weighted mix of country risk, industry risk and commodity risk as well as public alert risk and the materiality of the supply relationship (procurement spend) & suppliers showing improvement potential in a former evaluation. The threshold for further activities is a combination of Labours Rights, Human Rights, Health & Safety and Environmental aspects.

% Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

☑ 1-25%

Number of Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

430

(5.11.2) Does your organization prioritize which suppliers to engage with on environmental issues?

Climate change

Supplier engagement prioritization on this environmental issue

☑ No, we do not prioritize which suppliers to engage with on this environmental issue

Primary reason for no supplier prioritization on this environmental issue

☑ We engage with all suppliers

Please explain

All Tier1 Supplier are part of our risk management system and are mapped in regards of Labours Rights, Human Rights, Health & Safety and Environmental aspects/risks. If we identify risks there is a process in place to agree on preventive and mitigation measures with a supplier. We only stop working with a supplier (where we identified risks) if he is not willing to stop risk and/or agree on a corrective action plan.

(5.11.5) Do your suppliers have to meet environmental requirements as part of your organization’s purchasing process?

Climate change

Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

☑ Yes, environmental requirements related to this environmental issue are included in our supplier contracts

Policy in place for addressing supplier non-compliance

☑ Yes, we have a policy in place for addressing non-compliance

Comment

Within the LHG Supplier Code of Conduct, which will handed out to every (potential) supplier, LHG consider legal compliance to be one of their primary duties. As part of LHGs corporate responsibility, the group also expect from their suppliers a similar behavior. Of course this includes that the supplier complies with the applicable climate related laws and regulations of the country in which it offers, manufactures or supplies products or services. The LHGs Supplier Code of Conduct also states that LHG is a member of the UN Global Compact and expects its suppliers to adhere to the principles of the UN Global Compact. This also includes the supplier dues: - supports a precautionary approach to environmental challenges; - supports initiatives to promote greater environmental responsibility; - encourages the development and diffusion of environmentally friendly technologies; LHG generally prefers to cooperate with such suppliers who make and demonstrate an active contribution to sustainability and environmental/ climate protection and constantly strives to improve the efficiency and sustainability of its operations. In order to ensure and demonstrate compliance with this Code of Conduct, the supplier shall keep record of all respective documentation, and provide to Lufthansa Group supporting documentation upon request. To verify suppliers’ compliance, LHG expects that the supplier supports the right to audit and inspect supplier's operations and facilities.

(5.11.6) Provide details of the environmental requirements that suppliers have to meet as part of your organization’s purchasing process, and the compliance measures in place.

Climate change

Environmental requirement

☑ Adoption of the UN International Labour Organization Principles

Mechanisms for monitoring compliance with this environmental requirement

☑ On-site third-party audit
☑ Supplier self-assessment
☑ Off-site third-party audit
☑ Supplier scorecard or rating
☑ Grievance mechanism/ Whistleblowing hotline
☑ Other, please specify: Risk Management System AI based

% tier 1 suppliers by procurement spend required to comply with this environmental requirement

☑ 100%

% tier 1 suppliers by procurement spend in compliance with this environmental requirement

☑ 76-99%

% tier 1 supplier-related scope 3 emissions attributable to the suppliers required to comply with this environmental requirement

☑ 100%

% tier 1 supplier-related scope 3 emissions attributable to the suppliers in compliance with this environmental requirement

☑ 76-99%

Response to supplier non-compliance with this environmental requirement

☑ Suspend and engage

% of non-compliant suppliers engaged

☑ 1-25%

Procedures to engage non-compliant suppliers

☑ Providing information on appropriate actions that can be taken to address non-compliance

Comment

Mentioned % in column ("% of non-compliant suppliers engaged") is based on the former answer in column ("% tier 1 supplier-related scope 3 emissions attributable to the suppliers in compliance with this environmental requirement). Procedures are only choosen if an alert will occure via supply chain risk management tool.

(5.11.7) Provide further details of your organization's supplier engagement on environmental issues.

Climate change

Action driven by supplier engagement

☑ Adoption of the United Nation's International Labour Organization principles

Type and details of engagement

Capacity building

☑ Provide training, support and best practices on how to measure GHG emissions

☑ Support suppliers to set their own environmental commitments across their operations

Financial incentives

☑ Provide financial incentives for environmental performance

Upstream value chain coverage

☑ Tier 1 suppliers

% of tier 1 suppliers by procurement spend covered by engagement

☑ 1-25%

% of tier 1 supplier-related scope 3 emissions covered by engagement

☑ Less than 1%

Describe the engagement and explain the effect of your engagement on the selected environmental action

1. Agreement with Hotels to wash less towels to reduce water pollution and also energy consumption and therefor emissions. For saved water trees were planted. 2. Project with catering supplier to monitor food waste with the aim of determining which components LHG may no longer load at all or in smaller quantities in future in order to reduce food waste.

Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

☑ Yes, please specify the environmental requirement**:** Yes - engagement is helping to meet the UN Global Compact principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.

Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

☑ Unknown

(5.11.9) Provide details of any environmental engagement activity with other stakeholders in the value chain.

Climate change

Type of stakeholder

☑ Customers

Type and details of engagement

Education/Information sharing

☑ Run an engagement campaign to educate stakeholders about the environmental impacts about your products, goods and/or services

% of stakeholder type engaged

☑ 100%

% stakeholder-associated scope 3 emissions

☑ 100%

Rationale for engaging these stakeholders and scope of engagement

To sensitize customers about GHG emissions of their flights with LHG aircraft and to show possibilities to mitigate this climate change impact, LHG Airlines offer programs to their customers to calculate the CO_2 emissions of their flight and offset or mitigate the unavoidable CO_2 emissions associated with their air travel through the purchase of carbon offsets or SAF. In 2019 LHG has launched the online CO_2 offsetting platform COMPENSAID for customers who wish either to buy SAF for their flights or to compensate with CO_2 reducing climate projects or a combination of both. With this innovation LHG offers as first airline worldwide its customers to buy SAF directly. LHG ensures the purchase and logistics of the SAF for the customer. The customer has the possibility to choose the amount of SAF and will pay the additional cost incurred to close the gap between fossil fuel and SAF. Since 2022 LHG is offering a new fare that already includes full CO_2 compensation. 80 % of the offsetting is done through high-quality climate protection projects and 20 % through the use of SAF. In the pilot project the new "Green Fare" were initially be offered to all guests booking their flight from Denmark, Sweden and Norway. In 2023 this offer was expanded with Lufthansa, Austrian Airlines, Brussels Airlines, SWISS, Edelweiss, Discover Airlines and Air Dolomiti on more than 730,000 flights per year within Europe and to Morocco, Algeria and Tunisia. The LHG has also been testing Green Fares on selected long-haul routes since November 2023. The LHG is continuously developing its offers and services for private travelers and corporate customers to offset flight-related CO2 emissions and is a global pioneer in this area. The company offers opportunities along the entire travel chain. In addition to choosing a special fare such as the Green Fares, passengers can also select individually tailored offers with a higher proportion of SAF, for example, during the booking process. It is also possible to offset flight-related CO2 emissions during or after the flight. In addition to private customers, more and more corporate customers are also using one of the LHG's offers for more sustainable flying: in 2023, more than 1,500 companies worldwide invested in SAF with the Lufthansa Group. By offer this option across the entire travel chain, we could reach 100% of our customers with our engagement measure.

Effect of engagement and measures of success

The success of this commitment is measured by the volume of carbon credits and Sustainable Aviation Fuel (SAF) purchased by customers. The thresholds for measuring success for customers were, on the one hand, the expansion of the CO_2 reduction (by SAF) and CO2 compensation by carbon credits along the travel route (book trip, take flight, after flight) and, on the other hand, at least a 10 % increasing of the CO_2 compensation volumes sold in the B2C area compared to the previous year. In addition, another focus was on communicating the differences between CO_2 offsetting by supporting climate protection projects and the possibility of immediately minimizing climate-impacting CO2 emissions by purchasing SAF. The success of this commitment is measured by the amount of carbon credits purchased by customers (including SAF): End of 2023 around 11 % of sold tickets on LH.com within Germany were "Green Fares" tickets. In total 4 % of LHG passengers use one of the various offers for more sustainable flying. In 2023, the total amount of carbon credits sold (CO_2 offsetting CO_2 SAF) in the B2C sector amounts to approximately 275,000 tons of CO_2 (8 % compared to 2022). This increase compared to 2022 is significant and can be considered a success.

Climate change

Type of stakeholder

☑ Investors and shareholders

Type and details of engagement

Education/Information sharing

☑ Educate and work with stakeholders on understanding and measuring exposure to environmental risks

☑ Share information about your products and relevant certification schemes

☑ Share information on environmental initiatives, progress and achievements

% of stakeholder type engaged

☑ 1-25%

% stakeholder-associated scope 3 emissions

☑ 1-25%

Rationale for engaging these stakeholders and scope of engagement

LHG regularly engages with investors and shareholders on climate change through events like roadshows, meetings, and reports (e.g., TCFD, SASB). This transparent communication is vital for several reasons: 1. financial performance and risk management Climate change poses significant risks to LHG's business, such as increased costs, supply chain disruption and asset devaluation. Regular dialog with investors and shareholders and the provision of transparent information about LHG's climate-related strategies, objectives, measures and performance ensures that they understand how LHG plans to mitigate these risks and increase the long-term value of the company, thereby remaining attractive to investors who are increasingly taking ESG factors into account in their investment decisions. 2. compliance with legal requirements: Governments and regulators are increasingly implementing laws and regulations related to climate change. Through dialog with investors, LHG ensures that they are aware of the company's compliance strategy and preparation for future regulations and avoids the risk of financial penalties through proactive engagement. 3. reputation and brand value: Addressing climate change and communicating transparently about it can improve a company's public image and reputation, making it more attractive to consumers, investors and potential business partners. By engaging with shareholders, LHG can communicate its efforts and successes in this area and build trust. 4. innovation and competitive advantage: Engaging with shareholders on climate change encourages LHG to develop or drive innovation in areas such as energy efficiency, renewable energy and sustainable products. This can lead to a competitive advantage on the market. The LHG's commitment to climate protection also helps the LHG stand out from its competitors and attract investors who prioritize sustainability. 5. Responding to investor activism: Shareholders are increasingly vocal on climate issues, and some are actively engaging to push for change. Proactive engagement can help address and allay investor concerns before they escalate into public campaigns or shareholder resolutions. By engaging investors, LHG can gather valuable feedback to refine their climate strategies and ensure they are aligned with shareholder expectations.

Effect of engagement and measures of success

To measure and assess the effectiveness of LHGs engagement activity with their investors, shareholders and the capital market, LHG uses the performance in the climate-related assessment categories of the ESG ratings that are important to LHG. In the reporting year LHG has received a rating above the sector average in the corresponding categories in all relevant ESG Ratings and were able to improve or maintain their very good rating compared to the previous year. Another criterion used to measure success is the number of successful responses to climate-related questions from our shareholders at the Annual Meeting. At the Annual Meeting for the reporting year 2023, all enquiries were answered without objection.

Climate change

Type of stakeholder

☑ Other value chain stakeholder, please specify**:** General public

Type and details of engagement

Education/Information sharing

☑ Share information on environmental initiatives, progress and achievements

% of stakeholder type engaged

☑ 1-25%

% stakeholder-associated scope 3 emissions

☑ 1-25%

Rationale for engaging these stakeholders and scope of engagement

Share concise information on environmental initiatives, progress, achievements and relevant KPI of the LH Group with the general public by issuing an annual publication.

Effect of engagement and measures of success

The utilization rate of the LH Group websites - where amongst others the Lufthansa Factsheet on Sustainability is published - is regularly measured, so also effect of this engagement is measured.

Climate change

Type of stakeholder

☑ Customers

Type and details of engagement

Innovation and collaboration

☑ Collaborate with stakeholders on innovations to reduce environmental impacts in products and services

% of stakeholder type engaged

☑ 1-25%

% stakeholder-associated scope 3 emissions

☑ 1-25%

Rationale for engaging these stakeholders and scope of engagement

As more and more companies are looking for ways to reduce the carbon footprint (CF) in their value chain (Scope 3) – and thus also in relation to business travel and/or goods transport. Accordingly, the demand for options to minimize the CF of business-related air travel grew continuously. With the input from the corporate customers LHG has set up in 2019 a corresponding program based on the option of voluntary CO_2 compensation that has already existed for individual travellers since 2007. Initially, selected corporate customers were offered the opportunity to completely offset the CO_2 emissions of their air travel on all intra-European flights with the LHG for a one-year test phase as part of the so-called "Corporate Value Fares" program. This offer was very well received and the demand for an extension was high so that LHG continued the program and extend it to a much larger corporate customer base. In addition, LHG offers the possibility to its corporate customers reduce CO_2 emissions with the purchase of Sustainable Alternative Fuel (SAF). In April 2021, the offsetting platform "COMPENSAID," which was already launched in 2019 by the Lufthansa Innovation Hub, was expanded to include a special program for corporate customers. Since then B2B customers have had the opportunity to offset the CO_2 emissions caused by their employees' flights en bloc and to use SAF for this in full or on a pro rata basis. LHG ensures the purchase and logistics of the sustainable aviation fuel for the customer. LHG has developed a proprietary process together with a neutral external auditor to certify the customer's SAF purchase, which can be used by the customer to reduce their respective Scope 3 carbon emissions. Lufthansa Cargo has also launched a corresponding offer with SAF and carbon offsetting projects. LH Cargo customers can use an CO_2 -calculator integrated into the online booking tool to determine and offset and/or mitigate the CO_2 emissions for the transport of their goods during the booking process. The add-on service 'Sustainable Choice' is available on all routes with a freighter segment, for all product groups and all customers worldwide. LHG is willing to further support the program's endeavor to make SAF more broadly available to the aviation in general and increasing demand and thereby promoting awareness, availability and profitability of alternative fuels.

Effect of engagement and measures of success

The LHG's commitment to voluntary CO_2 offsetting is meeting with a high level of interest from an increasing number of corporate customers. The offer was very well received in 2023 and a total of 184,000 tons of CO_2 were offset by B2B customers through climate protection projects (8 % vs. 2022). In addition, 21,000 tons of climate-impacting CO_2 were mitigated through SAF purchasing by B2B customers. The SAF for the program is not derived from palm oil or palm fatty acid distillates. The fuel manufacturer is certified according to EU-ISCC and complies with the requirements of the RED II and the certification system ISCC EU which is approved by the European Commission. By replacing fossil jet fuel with SAF, aviation's carbon emissions can be significantly reduced by 80% to 90 %. As the prices for SAF are currently significantly higher than those of fossil kerosene, Lufthansa is willing to support the program's endeavor to make SAF more broadly available to the aviation in general. Therefore through the larger B2B SAF-volumes, LHG are increasing demand and thereby promoting awareness, availability and profitability of alternative fuels. Therefore LHG has committed to purchase SAF for a quarter of a billion US-Dollars (or 234 mn) between 2022 and 2024 in order to be able to meet the foreseeable increase in demand in the coming years.

C6. Environmental Performance - Consolidation Approach

(6.1) Provide details on your chosen consolidation approach for the calculation of environmental performance data.

Climate change

Consolidation approach used

☑ Financial control

Provide the rationale for the choice of consolidation approach

LHG uses the financial control approach in CDP reporting to go conform with the chosen approach for our business and financial reporting and with our validated SBTI targets. The financial control approach also complies with the recommendations of the GHG Protocol Corporate Standards for the consolidation of the GHG inventory.

Plastics

Consolidation approach used

☑ Financial control

Provide the rationale for the choice of consolidation approach

The financial control approach is applied in order to follow the same approach as in the LHG business and financial reporting and thus establish comparability.

Biodiversity

Consolidation approach used

☑ Financial control

Provide the rationale for the choice of consolidation approach

The financial control approach is applied in order to follow the same approach as in the LHG business and financial reporting and thus establish comparability.
[Fixed row]

C7. Environmental performance - Climate Change

(7.1.1) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

	Has there been a structural change?	Name of organization(s) acquired, divested from, or merged with	Details of structural change(s), including completion dates
	☑ Yes, a divestment	*LSG Group (remaining sites)*	*The last remaindering sites of the LSG Group left LH Group and were transferred to the new owner, the AURELIUS Group*

(7.1.2) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
	☑ No

(7.1.3) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in 7.1.1 and/or 7.1.2?

Base year recalculation

☑ No, because the impact does not meet our significance threshold

Base year emissions recalculation policy, including significance threshold

Recalculation only applied if the impact is greater than 1 percent in reference to the combined Scope 1 and 2 emissions of the Lufthansa Group in Base Year

Past years' recalculation

☑ No

(7.3) Describe your organization’s approach to reporting Scope 2 emissions.

Scope 2, location-based

☑ We are reporting a Scope 2, location-based figure

Scope 2, market-based

☑ We are reporting a Scope 2, market-based figure

Comment

Scope 2 location-based figure is calculated with location-based factors (IEA EMISSION FACTORS 2021). Scope 2 market-based figure is calculated with market-based factors for electricity delivered by our energy suppliers where available. For all other sites, where market-based-factors were not available, we used location-based factors to complete the market-based figure.

(7.4.1) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source of excluded emissions

Non-owned offices in countries outside of Europe: Small offices that are used but not owned by LHG. Incomplete information for the period in question.

Scope(s) or Scope 3 category(ies)

☑ Scope 1

☑ Scope 2 (location-based)

☑ Scope 2 (market-based)

Relevance of Scope 1 emissions from this source

☑ Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

☑ Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source

☑ Emissions are not relevant

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0.5

Explain why this source is excluded

impact is lower than 1 percent in reference to the combined Scope 1 and 2 emissions of the Lufthansa Group in Base Year

Explain how you estimated the percentage of emissions this excluded source represents

expert estimates

(7.5) Provide your base year and base year emissions.

Scope 1

Base year end

12/31/2019

Base year emissions (metric tons CO2e)

33349293

Methodological details

LH Group Carbon Footprint Scope 1 sum [energy consumptions i,j x emission factors i,k] whereas "i" is the counter for each of LH group world-wide fully consolidated major sites and aircraft fleets in LH Group operations and "j" is the counter for each of the respective group-wide natural gas-, heating oil-, gasoline-, diesel-, AVGAS- and kerosine-consumptions and "k" is the counter for each of the group-wide natural gas-, heating oil-, gasoline-, diesel- and kerosine-emission-

factors. The above-mentioned measurement approach, the emission factors and their sources used, the inputs and assumptions were approved by the auditors that audited the base year measurement approach. Emission factors from relevant, recognized standards / sources such as DIN EN 16258, the IEA and DEFRA were used for the calculation.

Scope 2 (location-based)

Base year end

12/31/2019

Base year emissions (metric tons CO2e)

259524

Methodological details

LH Group Carbon Footprint Scope 2 location based sum [energy consumptions i,j x emission factors i,k] whereas "i" is the counter for each of LH group world-wide fully consolidated major ground sites and electric ground vehicles associated to fully consolidated BUs in LH Group ownership and "j" is the counter for each of the group-wide electricity and district-heating/cooling consumptions and "k" is the counter for each of the group-wide location-based electricity- and district-heating/cooling-emission factors. The above-mentioned measurement approach, the emission factors and their sources used, the inputs and assumptions were approved by the auditors that audited the base year measurement approach. Emission factors from relevant, recognized standards / sources such as DIN EN 16258, the IEA and DEFRA were used for the calculation.

Scope 2 (market-based)

Base year end

12/31/2019

Base year emissions (metric tons CO2e)

199816

Methodological details

LH Group Carbon Footprint Scope 2 market based sum [energy consumptions i,j x emission factors i,k] whereas "i" is the counter for each of LH group world-wide fully consolidated major ground sites and electric ground vehicles associated to fully consolidated BUs in LH Group ownership and "j" is the counter for each of the

group-wide electricity and district-heating/cooling consumptions and "k" is the counter for each of the group-wide location-based electricity- and district-heating/cooling-emission factors. The above-mentioned measurement approach, the emission factors and their sources used, the inputs and assumptions were approved by the auditors that audited the base year measurement approach. Emission factors from relevant, recognized standards / sources such as DIN EN 16258, the IEA and DEFRA were used for the calculation.

Scope 3 category 1: Purchased goods and services

Base year end

12/30/2019

Base year emissions (metric tons CO2e)

190809

Methodological details

Included hera are the cradle-to-gate emissions for all procured products by LSG Lufthansa Service Holding AG, catering business segment as well as the emitted CO2e emissions during the manufacturing of a flight simulator were calculated in this category. It was assumed and estimated to be comparable to those generated in the production of an aircraft (excluding engine manufacturing). The differences between an aircraft and an aircraft simulator are put into perspective via the values of the respective product. The value of a flight simulator represents approximately 8-10% of the value of an aircraft, considering both production and sales. Hence, it is assumed that a simulator releases 10% of the emissions of the corresponding aircraft during manufacturing.

Scope 3 category 2: Capital goods

Base year end

12/31/2019

Base year emissions (metric tons CO2e)

806400

Methodological details

The "Capital Goods" category comprises emissions from the production of newly acquired and delivered aircraft within the reporting year. To evaluate the emissions from the production of newly acquired and delivered aircraft, calculation formulas are used, incorporating both internal data and external sources. The foundation of LHG's calculation approaches relies on data published by aircraft manufacturers.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year end

12/31/2019

Base year emissions (metric tons CO2e)

7433106

Methodological details

The category "Fuel and energy-related activities not included in Scope 1 and 2" currently encompasses emissions from upstream activities related to purchased fuels (Jet Fuel), as well as purchased electricity and district heating/cooling, including generation and transmission and distribution (T&D) losses, in the reporting year. This includes, (A) Well-to-Tank (WTT) emissions from the production and transport of Jet Fuel, (B) WTT emissions from the generation of electricity and district heating/cooling, and (C) WTT emissions from T&D losses of electricity and district heating/cooling. Emission factors from relevant, recognized standards / sources are used for the calculation - such as DIN EN 16258 or ISO 14083 and the IEA and DEFRA.

Scope 3 category 4: Upstream transportation and distribution

Base year end

12/31/2019

Base year emissions (metric tons CO2e)

1441305

Methodological details

The "Upstream Transportation & Distribution" category encompasses emissions from the following activities: 1. Flights for LHG airlines operated by third-party airlines. Third-party aircraft CO2e emissions measured in internal data base, using the same TTW approach as for own Scope 1 aircraft emissions. 2. Road Feeder Services provided by Lufthansa Cargo AG. Emissions are calculated based on the following assumptions: a.) transported ton-kilometers (FTKT) by trucks, b.) road kilometers driven (average values determined per leg and stored in a list), c.) average fuel consumption for truck transport, 3. LH Express Rail & Bus services, incl. feeder transportation by third-party trains or buses, 4. Airport operations by using Scope 1 and Scope 2 (market-based) emission data from main airports, along with the respective MTOM (maximum takeoff mass) share of all LHG airlines in the total MTOM of the airports.

Scope 3 category 5: Waste generated in operations

Base year end

12/31/2019

Base year emissions (metric tons CO2e)

270652

Methodological details

CO2e emissions are calculated based on the waste quantities reported. Specific emission factors are used, which depend on the disposal/recycling route. The "average-data method" used for this calculation complies with the GHG Protocol Technical Guidance document.

Scope 3 category 6: Business travel

Base year end

12/31/2019

Base year emissions (metric tons CO2e)

62959

Methodological details

The "Business Travel" category includes CO2e emissions from LHG staff air travel (including crew proceedings) and emissions from hotel accommodations by LHG employees (including crew members). Emissions from business trips on LHG-owned aircraft are recorded under Scope 1, so only emissions from non-LHG fleet aircraft (other airline flights (OAL)) are included in this Scope 3 category. To calculate CO2e emissions from hotel stays specific hotel data on emissions and energy, water, and waste consumption collected through a survey or specific supplier based or public available databases are used.

Scope 3 category 7: Employee commuting

Base year end

12/31/2019

Base year emissions (metric tons CO2e)

37867

Methodological details

Emissions for this category are estimated using the GHG Protocol's Average-Data Method. Internal headcount data and external commuting statistics for Germany are used to perform the estimation, incorporating externally available emission factors for various transportation modes.

Scope 3 category 9: Downstream transportation and distribution

Base year end

12/30/2023

Base year emissions (metric tons CO2e)

512

Methodological details

Within this category - which is calculated for the first time in 2023 (because of no relevance in the previous years) - the emissions of resulting from Lufthansa Technik's Continuing airworthiness management organization (CAMO) flights during the reporting year are calculated, by multiplying associated fuel consumption by the TTW emission factor.

Scope 3 category 13: Downstream leased assets

Base year end

12/31/2019

Base year emissions (metric tons CO2e)

64854

Methodological details

For calculating CO2e emissions in this category, emssions from leased-out aircraft from LHG in the reporting year, are calculated by using the fuel consumption from internal database.

Scope 3 category 15: Investments

Base year end

12/30/2019

Base year emissions (metric tons CO2e)

859154

Methodological details

Emissions in this category are calculated using energy consumption data and Scope 1 and 2 emissions of relevant Joint Ventures.

(7.6) What were your organization’s gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

26822114

Methodological details

LH Group Carbon Footprint Scope 1 sum [energy consumptions i,j x emission factors i,k] whereas "i" is the counter for each of LH group world-wide fully consolidated major sites and aircraft fleets in LH Group operations and "j" is the counter for each of the respective group-wide natural gas-, heating oil-, gasoline-, diesel-, AVGAS- and kerosine-consumptions and "k" is the counter for each of the group-wide natural gas-, heating oil-, gasoline-, diesel- and kerosine-emission-factors. The above-mentioned measurement approach, the emission factors and their sources used, the inputs and assumptions were approved by the auditors that audited the base year measurement approach. Emission factors from relevant, recognized standards / sources such as DIN EN 16258, the IEA and DEFRA were used for the calculation.

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)

23170076

End date

12/30/2022

Methodological details

LH Group Carbon Footprint Scope 1 sum [energy consumptions i,j x emission factors i,k] whereas "i" is the counter for each of LH group world-wide fully consolidated major sites and aircraft fleets in LH Group operations and "j" is the counter for each of the respective group-wide natural gas-, heating oil-, gasoline-, diesel-, AVGAS- and kerosine-consumptions and "k" is the counter for each of the group-wide natural gas-, heating oil-, gasoline-, diesel- and kerosine-emission-factors. The above-mentioned measurement approach, the emission factors and their sources used, the inputs and assumptions were approved by the auditors that

audited the base year measurement approach. Emission factors from relevant, recognized standards / sources such as DIN EN 16258, the IEA and DEFRA were used for the calculation.

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)

13823320

End date

12/30/2021

Methodological details

LH Group Carbon Footprint Scope 1 sum [energy consumptions i,j x emission factors i,k] whereas "i" is the counter for each of LH group world-wide fully consolidated major sites and aircraft fleets in LH Group operations and "j" is the counter for each of the respective group-wide natural gas-, heating oil-, gasoline-, diesel-, AVGAS- and kerosine-consumptions and "k" is the counter for each of the group-wide natural gas-, heating oil-, gasoline-, diesel- and kerosine-emission-factors. The above-mentioned measurement approach, the emission factors and their sources used, the inputs and assumptions were approved by the auditors that audited the base year measurement approach. Emission factors from relevant, recognized standards / sources such as DIN EN 16258, the IEA and DEFRA were used for the calculation.

(7.7) What were your organization’s gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Gross global Scope 2, location-based emissions (metric tons CO2e)

160926

Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

90673

Methodological details

LH Group Carbon Footprint Scope 2 location based sum [energy consumptions i,j x emission factors i,k] whereas "i" is the counter for each of LH group world-wide fully consolidated major ground sites and electric ground vehicles associated to fully consolidated BUs in LH Group ownership and "j" is the counter for each of the group-wide electricity and district-heating/cooling consumptions and "k" is the counter for each of the group-wide location-based electricity- and district-heating/cooling-emission factors. The above-mentioned measurement approach, the emission factors and their sources used, the inputs and assumptions were approved by the auditors that audited the base year measurement approach. Scope 2 location-based figure was calculated with location-based factors (IEA EMISSION FACTORS 2021). Scope 2 market-based figure is calculated with market-based factors for electricity delivered by our energy suppliers where available. For all other sites, where market-based-factors weren't available, we used location-based factors to complete the market-based figure. In the CDP-report, we calculated our Scope 2 location-based emissions as instructed in the CDP-guidance. Therefore, we used location-based factors also for sites, where 100 % green power was used.

Past year 1

Gross global Scope 2, location-based emissions (metric tons CO2e)

200314

Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

125245

End date

12/30/2022

Methodological details

LH Group Carbon Footprint Scope 2 location based sum [energy consumptions i,j x emission factors i,k] whereas "i" is the counter for each of LH group world-wide fully consolidated major ground sites and electric ground vehicles associated to fully consolidated BUs in LH Group ownership and "j" is the counter for each of the group-wide electricity and district-heating/cooling consumptions and "k" is the counter for each of the group-wide location-based electricity- and district-heating/cooling-emission factors. The above-mentioned measurement approach, the emission factors and their sources used, the inputs and assumptions were approved by the auditors that audited the base year measurement approach. Scope 2 location-based figure was calculated with location-based factors (IEA EMISSION FACTORS 2021). Scope 2 market-based figure is calculated with market-based factors for electricity delivered by our energy suppliers where available. For all other sites, where market-based-factors weren't available, we used location-based factors to complete the market-based figure. In the CDP-report, we calculated our Scope 2 location-based emissions as instructed in the CDP-guidance. Therefore, we used location-based factors also for sites, where 100 % green power was used.

Past year 2

Gross global Scope 2, location-based emissions (metric tons CO2e)

205292

Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

139496

End date

12/30/2021

Methodological details

LH Group Carbon Footprint Scope 2 location based sum [energy consumptions i,j x emission factors i,k] whereas "i" is the counter for each of LH group world-wide fully consolidated major ground sites and electric ground vehicles associated to fully consolidated BUs in LH Group ownership and "j" is the counter for each of the group-wide electricity and district-heating/cooling consumptions and "k" is the counter for each of the group-wide location-based electricity- and district-heating/cooling-emission factors. The above-mentioned measurement approach, the emission factors and their sources used, the inputs and assumptions were approved by the auditors that audited the base year measurement approach. Scope 2 location-based figure was calculated with location-based factors (IEA EMISSION FACTORS 2021). Scope 2 market-based figure is calculated with market-based factors for electricity delivered by our energy suppliers where available. For all other sites, where market-based-factors weren't available, we used location-based factors to complete the market-based figure. In the CDP-report, we calculated our Scope 2 location-based emissions as instructed in the CDP-guidance. Therefore, we used location-based factors also for sites, where 100 % green power was used.

(7.8) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

☑ Relevant, calculated

Emissions in reporting year (metric tons CO2e)

9465

Emissions calculation methodology

☑ Average spend-based method
☑ Asset-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

30

Please explain

This category includes GHG emissions from the production of flight simulators, which LHG bought in 2023. Based on the assumption that the greenhouse gas emissions from the manufacture of aircraft and flight simulators are roughly the same, the emissions were estimated according to the emissions from aircraft manufacture in relation to the cost of a corresponding aircraft versus simulator. In 2023 LHG has bought six new flight simulators (three small sized training aircraft models and three large sized aircraft models). Emissions from aircraft / engine manufacturing are relevant to LHG. According to the GHG Protocol these can be accounted either for "Purchased goods and services" or "Capital goods" (cp. "Guidance for Calculating Scope 3 Emissions" from the Greenhouse Gas Protocol, p.23). Hence, GHG emissions from aircraft and engine manufacturing were accounted to capital goods. This category includes GHG emissions from the production of flight simulators, which LHG bought in 2023. Despite the share of

Capital goods

Evaluation status

☑ Relevant, calculated

Emissions in reporting year (metric tons CO2e)

368744

Emissions calculation methodology

☑ Other, please specify **:**Aircraft / Engine manufacturing: GHG emissions which are emitted through the process of aircraft and engine manufacturing. Calculation on the data reported by manufactures.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

70

Please explain

The emissions calculated reflect the LHG purchased aircraft deliveries in 2023. In 2023 the LHG has entered into service 27 new aircraft (18 medium sized and 9 large sized aircraft in LHG ownership). Leased aircraft where not accounted here due to its leased status. Aircraft / Engine manufacturing: In 2023 the calculation method used is based on a high proportion of primary data and uses scope 1, 2 and relevant aircraft related Scope 3 emissions published by the aircraft manufacturers as well as the aircraft-related sales and the respective aircraft empty operational weight for the calculation.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

☑ Relevant, calculated

Emissions in reporting year (metric tons CO2e)

5994878

Emissions calculation methodology

☑ Other, please specify **:**Upstream emissions of purchased fuels: CO2 emissions that are emitted in the supply chain of kerosene (Well-to-Tank-Process). The calculation is based on the burned kerosene by all aircraft and on the emission factor from the DIN EN Standard 16258.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

According to Greenhouse Gas Protocol aggregated number from the following subcategories: A) Upstream emissions of purchased fuels: CO_2 emissions which are emitted along the supply chain of kerosene (Well-to-Tank-Process). The calculation is based on the burned kerosene by all aircraft (those emissions are reported in Scope 1) and on the emission factor from the DIN EN Standard 16258. B) Upstream emissions of purchased electricity: The calculation is based on emission factors from the DEFRA 2021 (Government emission conversion factors for greenhouse gas company reporting). The calculation method is based on the average-data method according to the "Guidance for Calculating Scope 3 Emissions" from the Greenhouse Gas Protocol (p.32 and following). C) transmission and distribution losses: The calculation is based on electric power and district heating transmission and distribution loss rates for the respective country from IEA Emissions factors 2021 (Upstream T&D losses electricity) and DEFRA, 2021 (Government emission conversion factors for greenhouse gas company reporting). The calculation method is based on the average-data method according to the "Guidance for Calculating Scope 3 Emissions" from the Greenhouse Gas Protocol (p.34). Estimates for the subcategory "D) Generation of purchased electricity that is sold to end users" were not conducted since it is not applicable to Lufthansa.

Upstream transportation and distribution

Evaluation status

☑ Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1122740

Emissions calculation methodology

☑ Average data method
☑ Fuel-based method
☑ Distance-based method
☑ Site-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

80

Please explain

Aggregated number from the following subcategories: 1. Flights for LHG services operated by third parties documented in our operational data-warehouse systems. These third parties are neither fully owned nor controlled by LHG. Fuel- and Distance based method used to calculate these emissions. 2. The Road Feeder Service, which transports airfreight by trucks from its initial origin to the airport, respectively from the airport to its final destination. Trucks are neither owned nor controlled by LHG. The emissions factor used was derived from the CLECAT-study ("Calculating GHG Emissions for Freight Forwarding and Logistics Services" (2012)) using the distance based method. 3. Airport operation: The GHG emissions which result from airport operation. Site-specific method used. The data was requested from the LHGs main hubs (Frankfurt, Munich, Zurich, Vienna and Bussels), which also report their emissions according to the GHG Protocol. According to the GHG Protocol life cycle emissions associated with manufacturing vehicles, facilities or infrastructure can be included in this category optionally (cp. "Guidance for Calculating Scope 3 emissions" from the Greenhouse Gas Protocol, p.4). 4. Further in this category emissions from ground based transportation performed by third parties (buses and trains) are included. The main part of the emissions in this category are resulting from flights for LHG services operated by third parties and from airport operation.

Waste generated in operations

Evaluation status

☑ Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3446

Emissions calculation methodology

☑ Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

80

Please explain

Waste data for 2023 was only available partly. Waste generated at home market locations (Germany, Austria, Switzerland and Belgium) is available for most of the LHG's companies. Due to the complete sale of LSG Sky Chefs, the Lufthansa Group's catering company, waste volumes and the resulting CO2e emissions in this category have fallen significantly compared to the previous year.

Business travel

Evaluation status

☑ Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

40719

Emissions calculation methodology

☑ Supplier-specific method
☑ Hybrid method
☑ Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Business travel includes emissions from flights operated by other (then LHG) airlines (using the distance-based method), since flights operated by LHG airlines are already included in Scope 1. Business travel also includes hotel overnight stays of LHG staff (including flight crew). The calculation method used is based on a high proportion of primary data. The emissions for staff accommodation were calculated based on a supplier based method and where supplier data were not available by using the Hotel Carbon Management Initiative (HCMI) database. This category is classified as "not relevant, calculated" for the LHG as they amounted to less than 1% of the Scope 3 emissions in the past two years.

Employee commuting

Evaluation status

☑ Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

54890

Emissions calculation methodology

☑ Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

25

Please explain

The emissions from employee commuting were calculated based on the "Mikrozensus 2020", a nationwide, governmental study that includes average commuting habits in Germany. Emissions factor actualized by using new data from Umweltbundesamt Germany. Since such data was not available for other countries the data was extrapolated to all LHG employees. Due to the share of employees working from their home-offices, the calculated emissions accounted for 2023 was reduced by 15%. This category is classified as "not relevant, calculated" for the LHG as they amounted to less than 1% of the Scope 3 emissions in the past two years.

Upstream leased assets

Evaluation status

☑ Not relevant, explanation provided

Please explain

Emissions from operating leased assets within the Lufthansa Group are accounted for in Scope 1 and Scope 2.

Downstream transportation and distribution

Evaluation status

☑ Relevant, calculated

Emissions in reporting year (metric tons CO2e)

525

Emissions calculation methodology

☑ Fuel-based method
☑ Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

This category covers emissions generated during the transfer of aircraft from customers that are taken over by LHT for a certain period of time, e.g. if they are to be leased, sold, converted or recycled. LHT is responsible for maintaining and restoring the airworthiness of these aircraft. This category is classified as "not relevant, calculated" for the LHG as they amounted to less than 1% of the Scope 3 emissions in the reporting year. In 2023 these emissions were calculated for the first time.

Processing of sold products

Evaluation status

☑ Not relevant, explanation provided

(Please explain

Within the LHG mainly transportation, maintenance and IT services are provided. These services are no physical products and hence cannot be sold or processed again. Therefore, emissions from processing of sold intermediate products by third parties in this category are not relevant to LHG (cp. "Guidance for Calculating Scope 3 Emissions" from the Greenhouse Gas Protocol, p.72).

Use of sold products

Evaluation status

☑ Not relevant, explanation provided

Please explain

Within the LHG mainly transportation, maintenance and IT services are provided. These services are not physical products and hence cannot be sold or processed again. Therefore, emissions from the use of sold goods and services by the end user are not relevant to LHG (cp. "Guidance for Calculating Scope 3 Emissions" from the Greenhouse Gas Protocol, p.77).

End of life treatment of sold products

Evaluation status

☑ Not relevant, explanation provided

Please explain

Within the LHG mainly transportation, maintenance and IT services are provided. These services are not physical products and hence cannot be sold or processed again. Therefore, end-of-life emissions from sold products due to waste disposal and treatment are not relevant to LHG (cp. Guidance for Calculating Scope 3 Emissions" from the Greenhouse Gas Protocol, p.88).

Downstream leased assets

Evaluation status

☑ Relevant, calculated

Emissions in reporting year (metric tons CO2e)

501813

Emissions calculation methodology

☑ Fuel-based method

☑ Other, please specify **:**The calculation is based on the Lufthansa Group's respective aircraft's internal fuel consumption of the respective leased aircraft type as a representative figure and extrapolated to the respective number of aircraft and their time of lease-out.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Emissions resulting from aircraft owned by the LHG and leased to other airlines outside the LHG. The calculation is based on the assumption that the leased aircraft have a similar capacity and fuel consumption as the respective aircraft types within the Lufthansa Group. Therefore, the calculation is based on the internal fuel consumption of the respective leased aircraft type as a representative figure and extrapolated to the respective number and time of lease.

Franchises

Evaluation status

☑ Not relevant, explanation provided

Please explain

The Lufthansa Group does not operate franchises, therefore this category is not relevant.

Investments

Evaluation status

☑ Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1964275

Emissions calculation methodology

☑ Fuel-based method

☑ Asset-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

The calculation is based on a pro-rata crediting of the emissions of LHG's joint ventures (e.g. the 50/50% Aerologic joint venture with DHL). The emissions are accounted for on the basis of the joint venture shares and takes into account the relevant Scope 1 and 2 emissions from these Joint Ventures. The emissions of LHG's joint ventures were calculated for the first time in previous year.

Other (upstream)

Evaluation status

☑ Not relevant, explanation provided

Please explain

There are no other Scope 3 upstream emissions which need to be accounted for. All relevant upstream emissions are covered by the upstream emission categories above.

Other (downstream)

Evaluation status

☑ Not relevant, explanation provided

Please explain

There are no other Scope 3 downstream emissions which need to be accounted for. All relevant downstream emissions are covered by the downstream emission categories above.

(7.8.1) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

End date

12/30/2022

Scope 3: Purchased goods and services (metric tons CO2e)

9196

Scope 3: Capital goods (metric tons CO2e)

240467

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

5192640

Scope 3: Upstream transportation and distribution (metric tons CO2e)

1074818

Scope 3: Waste generated in operations (metric tons CO2e)

40499

Scope 3: Business travel (metric tons CO2e)

40902

Scope 3: Employee commuting (metric tons CO2e)

42847

Scope 3: Downstream leased assets (metric tons CO2e)

526538

Scope 3: Investments (metric tons CO2e)

1787198

Comment

note: all categories left empty were verified as "not relevant" by the auditors in the respective past year.

Past year 2

End date

12/30/2021

Scope 3: Purchased goods and services (metric tons CO2e)

10910

Scope 3: Capital goods (metric tons CO2e)

245700

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

3109427

Scope 3: Upstream transportation and distribution (metric tons CO2e)

766768

Scope 3: Waste generated in operations (metric tons CO2e)

82237

Scope 3: Business travel (metric tons CO2e)

21432

Scope 3: Employee commuting (metric tons CO2e)

29823

Scope 3: Downstream leased assets (metric tons CO2e)

401252

Comment

note: all categories left empty were verified as "not relevant" by the auditors in the respective past year.

(7.9) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	☑ Third-party verification or assurance process in place

	Verification/assurance status
Scope 2 (location-based or market-based)	☑ Third-party verification or assurance process in place
Scope 3	☑ Third-party verification or assurance process in place

(7.9.1) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Row 1

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Reasonable assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

(7.9.2) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Row 1

Scope 2 approach

☑ Scope 2 location-based

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/ section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 2

Scope 2 approach

☑ Scope 2 market-based

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/ section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

(7.9.3) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Row 1

Scope 3 category

☑ Scope 3: Purchased goods and services

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 2

Scope 3 category

☑ Scope 3: Capital goods

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 3

Scope 3 category

☑ Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 4

Scope 3 category

☑ Scope 3: Upstream transportation and distribution

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 5

Scope 3 category

☑ Scope 3: Waste generated in operations

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 6

Scope 3 category

☑ Scope 3: Business travel

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 7

Scope 3 category

☑ Scope 3: Employee commuting

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 8

Scope 3 category

☑ Scope 3: Upstream leased assets

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 9

Scope 3 category

☑ Scope 3: Downstream transportation and distribution

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 10

Scope 3 category

☑ Scope 3: Downstream leased assets

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

Attach the statement

LH Group opinion statement AND verification statement.pdf

Page/section reference

pages 1 - 7

Relevant standard

☑ ISO14064-3

Proportion of reported emissions verified (%)

100

Row 11

Scope 3 category

☑ Scope 3: Investments

Verification or assurance cycle in place

☑ Annual process

Status in the current reporting year

☑ Complete

Type of verification or assurance

☑ Limited assurance

(7.9.3.7) Relevant standard

☑ ISO14064-3

(7.9.3.8) Proportion of reported emissions verified (%)

100

(7.10.1) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

Change in renewable energy consumption

Change in emissions (metric tons CO2e)

272

Direction of change in emissions

☑ Increased

Emissions value (percentage)

0.0012

Please explain calculation

*By the utilization of Sustainable Alternate Fuels (SAF) 43,900 tons of CO_2 were reduced in the reporting year 2022. In the reporting year 2023 the reduction decreased marginally to 43,628 tons of CO_2. That decrease by 272 tons of reduced CO_2 represents a percentage change of 0.0012 % in relation to the LH Group's total scope 12 footprint in 2022. Calculation: 43,628 t CO_2 - 43,900 t CO_2 -272 t CO_2; -272 t CO_2 / 23,335,724 t CO_2*100 -0.0012 % Formula: X ((Change in Scope 1 2 emissions attributed to the reason described in column 1) / (Previous year Scope 12 emissions)) 100*

Other emissions reduction activities

Change in emissions (metric tons CO2e)

3492

Direction of change in emissions

☑ Decreased

Emissions value (percentage)

0.015

Please explain calculation

*By implementing 10 additional fuel saving projects in 2023 additional annual savings of 3,492 tons of CO_2 could be realized in 2023 (see 7.55.1). This represents a 0.015 % saving in relation to the LH Group's total scope 12 footprint of 2022. Calculation: 3,492 t CO_2 / 23,335,724 t CO_2 * 100 0.015 % savings. Formula: X ((Change in Scope 1 2 emissions attributed to the reason described in column 1) / (Previous year Scope 12 emissions)) 100*

Change in output

Change in emissions (metric tons CO2e)

3577064

Direction of change in emissions

☑ Increased

Emissions value (percentage)

15.3

Please explain calculation

*Whereas air traffic demand took up in 2023 compared to 2022, LH Group's flight production was increased (t.km 16,4 %), leading to a higher kerosene consumption and accordingly to rising CO_2 emissions (15,3 %). The rise in emissions was nevertheless 1.1 %P lower than the rise in production, so production was more CO_2-efficient in 2023 compared to 2022. Note: flight fuel emissions account with a share of 99.5 % for the major part of the LHG's combined Scope 12 emissions. The change in emissions was calculated as follows: total Scope 12 2023 minus total Scope 12 2022: (26,822,114 t $CO_2$90,672 t CO_2) - (23,210,476 t $CO_2$125,245 t CO_2) 3,577,064 t CO_2. Calculation of percentage change CO_2 2023 versus 2022 in relation to the LH Group's total scope 12 footprint of 2022: 3,577,064 t CO_2 / (23,210,476 t $CO_2$125,245 t CO_2) *100 15.3%. The change in flight production (t.km) was calculated as follows: flight production in 2023 minus flight production in 2022: 31,925,000,000 t.km - 27,427,000,000 t.km 4,498,000,000 t.km. Calculation of percentage change: 4,498,000,000 t.km/27,427,000,000 tkm)*100 16.4 %. The efficiency increase of 1.1 %P was calculated as follows: 16.4 % - 15.3 % 1.1 %P.. Formula applied as specified in guidance: X ((Change in Scope 1 2 emissions attributed to the reason described in column 1) / (Previous year Scope 12 emissions)) 100*

(7.16) Break down your total gross global Scope 1 and 2 emissions by country/area.

Albania

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

10.237

Scope 2, market-based (metric tons CO2e)

10.237

Angola

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

0.816

Scope 2, market-based (metric tons CO2e)

0.816

Argentina

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

0.545

Scope 2, market-based (metric tons CO2e)

0.545

Austria

Scope 1 emissions (metric tons CO2e)

2101193.34

Scope 2, location-based (metric tons CO2e)

7759.198

Scope 2, market-based (metric tons CO2e)

7759.198

Azerbaijan

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

1.633

Scope 2, market-based (metric tons CO2e)

1.633

Bahrain

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

2.208

Scope 2, market-based (metric tons CO2e)

2.208

Belarus

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

1.925

Scope 2, market-based (metric tons CO2e)

1.925

Belgium

Scope 1 emissions (metric tons CO2e)

1494497.063

Scope 2, location-based (metric tons CO2e)

956.291

Scope 2, market-based (metric tons CO2e)

432.759

Benin

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

14.355

Scope 2, market-based (metric tons CO2e)

14.355

Brazil

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

179.855

Scope 2, market-based (metric tons CO2e)

179.855

Bulgaria

Scope 1 emissions (metric tons CO2e)

975.455

Scope 2, location-based (metric tons CO2e)

2051.497

Scope 2, market-based (metric tons CO2e)

2399.935

Burkina Faso

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

7.683

Scope 2, market-based (metric tons CO2e)

7.683

Burundi

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

6.863

Scope 2, market-based (metric tons CO2e)

6.863

Cameroon

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

16.399

Scope 2, market-based (metric tons CO2e)

16.399

China

Scope 1 emissions (metric tons CO2e)

122.456

Scope 2, location-based (metric tons CO2e)

4269.354

Scope 2, market-based (metric tons CO2e)

5469.79

Côte d'Ivoire

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

11.998

Scope 2, market-based (metric tons CO2e)

11.998

Croatia

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

0.567

Scope 2, market-based (metric tons CO2e)

0.567

Czechia

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

12.877

Scope 2, market-based (metric tons CO2e)

12.877

Democratic Republic of the Congo

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

67.66

Scope 2, market-based (metric tons CO2e)

67.66

Denmark

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

7.102

Scope 2, market-based (metric tons CO2e)

7.102

Finland

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

6.053

Scope 2, market-based (metric tons CO2e)

6.053

France

Scope 1 emissions (metric tons CO2e)

26.086

Scope 2, location-based (metric tons CO2e)

17.707

Scope 2, market-based (metric tons CO2e)

17.707

Gambia

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

13.496

Scope 2, market-based (metric tons CO2e)

13.496

Germany

Scope 1 emissions (metric tons CO2e)

17928183.201

Scope 2, location-based (metric tons CO2e)

117165.417

Scope 2, market-based (metric tons CO2e)

60716.442

Ghana

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

5.412

Scope 2, market-based (metric tons CO2e)

5.412

Greece

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

7.865

Scope 2, market-based (metric tons CO2e)

7.865

Guinea

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

1.278

Scope 2, market-based (metric tons CO2e)

1.278

Hong Kong SAR, China

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

54.347

Scope 2, market-based (metric tons CO2e)

54.347

Hungary

Scope 1 emissions (metric tons CO2e)

116.921

Scope 2, location-based (metric tons CO2e)

770.651

Scope 2, market-based (metric tons CO2e)

464.613

India

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

49.851

Scope 2, market-based (metric tons CO2e)

49.851

Ireland

Scope 1 emissions (metric tons CO2e)

214.842

Scope 2, location-based (metric tons CO2e)

2060.935

Scope 2, market-based (metric tons CO2e)

17.512

Israel

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

10.936

Scope 2, market-based (metric tons CO2e)

10.936

Italy

Scope 1 emissions (metric tons CO2e)

276701.098

Scope 2, location-based (metric tons CO2e)

445.716

Scope 2, market-based (metric tons CO2e)

161.571

Japan

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

31.846

Scope 2, market-based (metric tons CO2e)

31.846

Kazakhstan

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

5.283

Scope 2, market-based (metric tons CO2e)

5.283

Kenya

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

7.882

Scope 2, market-based (metric tons CO2e)

7.882

Luxembourg

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

1.711

Scope 2, market-based (metric tons CO2e)

1.711

Malta

Scope 1 emissions (metric tons CO2e)

394398.722

Scope 2, location-based (metric tons CO2e)

985.163

Scope 2, market-based (metric tons CO2e)

1060.069

Mexico

Scope 1 emissions (metric tons CO2e)

173.718

Scope 2, location-based (metric tons CO2e)

115.887

Scope 2, market-based (metric tons CO2e)

115.887

Netherlands

Scope 1 emissions (metric tons CO2e)

27.438

Scope 2, location-based (metric tons CO2e)

53.232

Scope 2, market-based (metric tons CO2e)

53.232

Norway

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

5.723

Scope 2, market-based (metric tons CO2e)

5.723

Philippines

Scope 1 emissions (metric tons CO2e)

2559.521

Scope 2, location-based (metric tons CO2e)

12168.542

Scope 2, market-based (metric tons CO2e)

1468.716

Poland

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

258.842

Scope 2, market-based (metric tons CO2e)

258.842

Portugal

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

3.552

Scope 2, market-based (metric tons CO2e)

3.552

Puerto Rico

Scope 1 emissions (metric tons CO2e)

26.445

Scope 2, location-based (metric tons CO2e)

1230.751

Scope 2, market-based (metric tons CO2e)

1654.304

Republic of Korea

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

12.558

Scope 2, market-based (metric tons CO2e)

12.558

Romania

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

4.021

Scope 2, market-based (metric tons CO2e)

4.021

Russian Federation

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

2.367

Scope 2, market-based (metric tons CO2e)

2.367

Rwanda

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

1.276

Scope 2, market-based (metric tons CO2e)

1.276

Saudi Arabia

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

6.026

Scope 2, market-based (metric tons CO2e)

6.026

Senegal

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

21.18

Scope 2, market-based (metric tons CO2e)

21.18

Sierra Leone

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

1.294

Scope 2, market-based (metric tons CO2e)

1.294

Singapore

Scope 1 emissions (metric tons CO2e)

0.117

Scope 2, location-based (metric tons CO2e)

55.633

Scope 2, market-based (metric tons CO2e)

49.267

Slovenia

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

1.45

Scope 2, market-based (metric tons CO2e)

1.45

Spain

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

22.548

Scope 2, market-based (metric tons CO2e)

22.548

Sweden

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

13.709

Scope 2, market-based (metric tons CO2e)

13.709

Switzerland

Scope 1 emissions (metric tons CO2e)

4618948

Scope 2, location-based (metric tons CO2e)

2871.631

Scope 2, market-based (metric tons CO2e)

2784.195

Togo

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

6.361

Scope 2, market-based (metric tons CO2e)

6.361

Tunisia

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

4.102

Scope 2, market-based (metric tons CO2e)

4.102

Turkey

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

15.967

Scope 2, market-based (metric tons CO2e)

15.967

Uganda

Scope 1 emissions (metric tons CO2e)

0

(Scope 2, location-based (metric tons CO2e)

7.172

Scope 2, market-based (metric tons CO2e)

7.172

United Arab Emirates

Scope 1 emissions (metric tons CO2e)

1.428

Scope 2, location-based (metric tons CO2e)

103.096

Scope 2, market-based (metric tons CO2e)

103.096

United Kingdom of Great Britain and Northern Ireland

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

753.039

Scope 2, market-based (metric tons CO2e)

86.664

United States of America

Scope 1 emissions (metric tons CO2e)

2429.774

Scope 2, location-based (metric tons CO2e)

6150.908

Scope 2, market-based (metric tons CO2e)

4937.171

Viet Nam

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based (metric tons CO2e)

14.9

Scope 2, market-based (metric tons CO2e)

14.9

(7.17.3) Break down your total gross global Scope 1 emissions by business activity.

	Activity	Scope 1 emissions (metric tons CO2e)
Row 1	*Aircraft maintainance, repair and overhaul*	*32343*
Row 2	*Aircraft and ground operations of passenger airlines*	*25441563*
Row 3	*Cargo*	*1343582*
Row 4	*Services (IT, Flight Training, additional customer services)*	*4627*

(7.19) Break down your organization’s total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

Transport services activities

Gross Scope 1 emissions, metric tons CO2e

26777440

Comment

For the LHG, transport service activities as a sector production activity only imply aircraft operations, not ground operations. Therefore, sector-specific Scope 1 emissions include the emissions from the aircraft fleet of LHG (verified with a high assurance).

(7.20.3) Break down your total gross global Scope 2 emissions by business activity.

	Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Row 1	*Aircraft maintainace, repair and overhaul*	*60083*	*22913*
Row 2	*Aircraft and ground operations of passenger airlines*	*52906*	*34210*
Row 3	*Cargo*	*19726*	*11290*
Row 4	*Services (IT, Flight Training, additional customer services)*	*28211*	*22260*

(7.21) Break down your organization’s total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Transport services activities	*72632*	*45500*	*Includes aircraft- and ground-operations of all LH Group airlines*

(7.22) Break down your gross Scope 1 and Scope 2 emissions between your consolidated accounting group and other entities included in your response.

Consolidated accounting group

Scope 1 emissions (metric tons CO2e)

26822114

Scope 2, location-based emissions (metric tons CO2e)

160926

Scope 2, market-based emissions (metric tons CO2e)

90673

Please explain

Financial control approach focussing on fully consolidated companies to report scope 1 and scope 2 emissions

All other entities

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based emissions (metric tons CO2e)

0

Scope 2, market-based emissions (metric tons CO2e)

0

Please explain

Financial control approach focussing on fully consolidated companies to report scope 1 and scope 2 emissions

(7.23.1) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Row 1

Subsidiary name

Air Dolomiti S.p.A. Linee Aeree Regionali Europee

Primary activity

☑ Passenger airlines

☑ No unique identifier

Scope 1 emissions (metric tons CO2e)

276630.036

Scope 2, location-based emissions (metric tons CO2e)

106.371

Scope 2, market-based emissions (metric tons CO2e)

106.371

Comment

.

Row 2

Subsidiary name

Lufthansa AirPlus Servicekarten GmbH

Primary activity

☑ Travel services

Select the unique identifier you are able to provide for this subsidiary

☑ No unique identifier

Scope 1 emissions (metric tons CO2e)

628.351

Scope 2, location-based emissions (metric tons CO2e)

916.175

Scope 2, market-based emissions (metric tons CO2e)

88.029

Comment

.

Row 3

Subsidiary name

Austrian Airlines AG

Primary activity

☑ Passenger airlines

Select the unique identifier you are able to provide for this subsidiary

☑ No unique identifier

Scope 1 emissions (metric tons CO2e)

2101174.978

Scope 2, location-based emissions (metric tons CO2e)

7398.265

Scope 2, market-based emissions (metric tons CO2e)

7398.265

Comment

.

Row 4

Subsidiary name

Lufthansa CityLine GmbH

Primary activity

☑ Passenger airlines

Select the unique identifier you are able to provide for this subsidiary

☑ No unique identifier

Scope 1 emissions (metric tons CO2e)

667719.939

Scope 2, location-based emissions (metric tons CO2e)

1680.105

Scope 2, market-based emissions (metric tons CO2e)

1221.92

Comment

.

Row 6

Subsidiary name

Deutsche Lufthansa AG

Primary activity

☑ Passenger airlines

Select the unique identifier you are able to provide for this subsidiary

☑ No unique identifier

Scope 1 emissions (metric tons CO2e)

13081816.359

Scope 2, location-based emissions (metric tons CO2e)

34291.817

Scope 2, market-based emissions (metric tons CO2e)

18935.843

Comment

.

Row 7

Subsidiary name

Edelweiss Air AG

Primary activity

☑ Passenger airlines

Select the unique identifier you are able to provide for this subsidiary

☑ No unique identifier

Scope 1 emissions (metric tons CO2e)

336827.181

Scope 2, location-based emissions (metric tons CO2e)

47.008

Scope 2, market-based emissions (metric tons CO2e)

47.008

Comment

.

Row 8

(7.23.1.1) Subsidiary name

EFM Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München

(7.23.1.2) Primary activity

Select from:

☑ Transportation support services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

1950.426

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

305.113

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

305.113

(7.23.1.15) Comment

.

Row 9

(7.23.1.1) Subsidiary name

Eurowings Aviation GmbH

(7.23.1.2) Primary activity

Select from:

☑ Passenger airlines

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

1926815.383

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

3260.727

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

2912.638

(7.23.1.15) Comment

.

Row 10

(7.23.1.1) Subsidiary name

Eurowings Discover GmbH

(7.23.1.2) Primary activity

Select from:
☑ Passenger airlines

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

1274199.98

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

274.359

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

274.359

(7.23.1.15) Comment

.

Row 11

(7.23.1.1) Subsidiary name

Lufthansa Global Telesales GmbH

(7.23.1.2) Primary activity

Select from:
☑ Travel services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

0

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

144.967

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

61.46

(7.23.1.15) Comment

.

Row 12

(7.23.1.1) Subsidiary name

Lufthansa Aviation Training GmbH

(7.23.1.2) Primary activity

Select from:
☑ Transportation support services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

1087.749

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

6879.682

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

2474.516

(7.23.1.15) Comment

.

Row 13

(7.23.1.1) Subsidiary name

Lufthansa Cargo AG

(7.23.1.2) Primary activity

Select from:
☑ Air freight

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

1343582.089

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

19725.929

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

11289.785

(7.23.1.15) Comment

.

Row 14

(7.23.1.1) Subsidiary name

Lufthansa Group Digital Hangar GmbH

(7.23.1.2) Primary activity

Select from:
☑ IT services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

0

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

44.708

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

29.312

(7.23.1.15) Comment

.

Row 15

(7.23.1.1) Subsidiary name

Lufthansa Industry Solutions GmbH & Co.KG

(7.23.1.2) Primary activity

Select from:
☑ IT services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

36.814

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

18571.951

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

18304.064

(7.23.1.15) Comment

-

Row 16

(7.23.1.1) Subsidiary name

Lufthansa Process Management GmbH

(7.23.1.2) Primary activity

Select from:
☑ IT services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

8.804

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

6.649

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

6.649

(7.23.1.15) Comment

.

Row 17

(7.23.1.1) Subsidiary name

Lufthansa Seeheim GmbH

(7.23.1.2) Primary activity

Select from:

☑ Hotels & lodging

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

744.252

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

1971.75

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

0

(7.23.1.15) Comment

.

Row 18

(7.23.1.1) Subsidiary name

Lufthansa Systems GmbH & Co.KG

(7.23.1.2) Primary activity

Select from:

☑ IT services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

170.296

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

851.901

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

556.812

(7.23.1.15) Comment

.

Row 19

(7.23.1.1) Subsidiary name

Lufthansa Technik AG

(7.23.1.2) Primary activity

Select from:

☑ Engineering services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

31914.956

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

53796.121

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

20004.821

(7.23.1.15) Comment

.

Row 20

(7.23.1.1) Subsidiary name

Lufthansa Technik Logistik Services GmbH

(7.23.1.2) Primary activity

Select from:
☑ Engineering services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

428.036

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

6287.368

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

2908.385

(7.23.1.15) Comment

.

Row 21

(7.23.1.1) Subsidiary name

Miles & More GmbH

(7.23.1.2) Primary activity

Select from:
☑ Transportation support services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

0

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

304.748

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

248.817

(7.23.1.15) Comment

.

Row 22

(7.23.1.1) Subsidiary name

Minor other business units

(7.23.1.2) Primary activity

Select from:
☑ Transportation support services

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

0

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

185.014

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

185.014

(7.23.1.15) Comment

.

Row 23

(7.23.1.1) Subsidiary name

Brussels Airlines SA/NV

(7.23.1.2) Primary activity

Select from:

☑ Passenger airlines

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

1494457.25

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

1131.398

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

607.866

(7.23.1.15) Comment

.

Row 24

(7.23.1.1) Subsidiary name

Swiss International Air Lines AG

(7.23.1.2) Primary activity

Select from:
☑ Passenger airlines

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply
☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

4281921.565

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

2744.257

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

2706.013

(7.23.1.15) Comment

.
[Add row]

(7.26) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Row 1

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify **:**Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

3819232

(7.26.9) Emissions in metric tonnes of CO2e

462.6

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by the Vodafone Group's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 2

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

10774514

(7.26.9) Emissions in metric tonnes of CO2e

1011.8

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by the Autodesk Inc's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 3

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

2185616

(7.26.9) Emissions in metric tonnes of CO2e

428.3

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by the Zimmer Biomet's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 4

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

18015762

(7.26.9) Emissions in metric tonnes of CO2e

2149.6

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by AstraZeneca's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 5

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:
☑ Scope 1

(7.26.4) Allocation level

Select from:
☑ Company wide

(7.26.6) Allocation method

Select from:
☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:
☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

3773075

(7.26.9) Emissions in metric tonnes of CO2e

411.9

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Givaudan SA's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 6

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

17539536

(7.26.9) Emissions in metric tonnes of CO2e

2036.5

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by the Swiss Re's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 7

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

61390440

(7.26.9) Emissions in metric tonnes of CO2e

7528.3

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The

emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Alphabeth Inc.'s accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 8

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

69888

(7.26.9) Emissions in metric tonnes of CO2e

7.2

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Canada Post Corporation's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 9

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:
☑ Scope 1

(7.26.4) Allocation level

Select from:
☑ Company wide

(7.26.6) Allocation method

Select from:
☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:
☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

1142257

(7.26.9) Emissions in metric tonnes of CO2e

138

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Paypal Holding's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 10

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

74717474

(7.26.9) Emissions in metric tonnes of CO2e

8828.4

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Deloitte Touche Tohmatsu Ltd.'s accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 11

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

3907954

(7.26.9) Emissions in metric tonnes of CO2e

404.9

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The

emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Vattenfalls's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 12

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

17373268

(7.26.9) Emissions in metric tonnes of CO2e

2468.7

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by JT International SA's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 13

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

62360290

(7.26.9) Emissions in metric tonnes of CO2e

7904.7

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Bayer AG's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 14

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

130727337

(7.26.9) Emissions in metric tonnes of CO2e

17938.4

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Mc Kinsey's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 15

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

16692863

(7.26.9) Emissions in metric tonnes of CO2e

1752.8

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The

emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Valeo SA's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 16

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

26239651

(7.26.9) Emissions in metric tonnes of CO2e

3050.5

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Deutsche Post AG's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 17

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

226466351

(7.26.9) Emissions in metric tonnes of CO2e

22807.6

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Robert Bosch GmbH's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 18

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

444831

(7.26.9) Emissions in metric tonnes of CO2e

38.8

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Airbnb Inc's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 19

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

82045884

(7.26.9) Emissions in metric tonnes of CO2e

9158

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The

emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Accenture's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 20

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

794610

(7.26.9) Emissions in metric tonnes of CO2e

92.3

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Arcadi's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 21

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

22096455

(7.26.9) Emissions in metric tonnes of CO2e

2852.2

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Compagnie Financiere Richemond's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 22

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

22420

(7.26.9) Emissions in metric tonnes of CO2e

2.1

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by JDE Peets's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 23

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

39649703

(7.26.9) Emissions in metric tonnes of CO2e

3642.8

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The

emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Capgemini SE's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 24

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

19076626

(7.26.9) Emissions in metric tonnes of CO2e

1949.5

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Medtronic PLC's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 25

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

3186292

(7.26.9) Emissions in metric tonnes of CO2e

266.5

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Embraer S.A.'s accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information

Row 26

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Other allocation method, please specify :Allocation is based on the number of flights purchased, the kilometres flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes)

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Passenger kilometers

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

178888844

(7.26.9) Emissions in metric tonnes of CO2e

20837.1

(7.26.10) Uncertainty (±%)

2

(7.26.11) Major sources of emissions

Source of emissions: Scope 1 emissions, which represent 72.5 % of the Lufthansa Group's total CO2 emissions (Scope 1-3). Scope 1 emissions result mainly from the jet fuel consumption of the Lufthansa Group's aircraft fleet.

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Allocation is based on the number of flights purchased, the kilometers flown and a calculated average Lufthansa fleet carbon factor (including the use of weight factors for different booking classes). More than 99.8% of the total Scope 1 emissions of Lufthansa Group result from jet kerosene consumption of aircraft. The emissions factor for jet kerosene is 3.15 metric tons CO2e per metric tons kerosene. Allocation is based on all flights booked by Airbus SE's accounts with the following Lufthansa Group Airlines: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings and Brussels Airlines.

(7.26.14) Where published information has been used, please provide a reference

LH Group uses internal information
[Add row]

(7.27) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Row 1

(7.27.1) Allocation challenges

Select from:

☑ We face no challenges

(7.27.2) Please explain what would help you overcome these challenges

-
[Add row]

(7.28) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

	Do you plan to develop your capabilities to allocate emissions to your customers in the future?	Describe how you plan to develop your capabilities
	Select from: ☑ Yes	*The LH Group is constantly reviewing and improving its capabilities in allocating and reporting customer specific CO2 values.*

[Fixed row]

(7.30) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	*Select from:* ☑ Yes
Consumption of purchased or acquired electricity	*Select from:* ☑ Yes
Consumption of purchased or acquired heat	*Select from:* ☑ Yes
Consumption of purchased or acquired steam	*Select from:* ☑ No
Consumption of purchased or acquired cooling	*Select from:* ☑ Yes
Generation of electricity, heat, steam, or cooling	*Select from:*

	Indicate whether your organization undertook this energy-related activity in the reporting year
	☑ Yes

[Fixed row]

(7.30.1) Report your organization’s energy consumption totals (excluding feedstocks) in MWh.

Consumption of fuel (excluding feedstock)

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

152427

(7.30.1.3) MWh from non-renewable sources

104178563

(7.30.1.4) Total (renewable and non-renewable) MWh

104330990

Consumption of purchased or acquired electricity

(7.30.1.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

29128

(7.30.1.3) MWh from non-renewable sources

302754

(7.30.1.4) Total (renewable and non-renewable) MWh

331882

Consumption of purchased or acquired heat

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

0

(7.30.1.3) MWh from non-renewable sources

97246

(7.30.1.4) Total (renewable and non-renewable) MWh

97246

Consumption of purchased or acquired cooling

(7.30.1.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

0

(7.30.1.3) MWh from non-renewable sources

97246

(7.30.1.4) Total (renewable and non-renewable) MWh

97246

Consumption of self-generated non-fuel renewable energy

(7.30.1.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

0

(7.30.1.4) Total (renewable and non-renewable) MWh

0

Total energy consumption

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

181555

(7.30.1.3) MWh from non-renewable sources

104675809

(7.30.1.4) Total (renewable and non-renewable) MWh

104857364
[Fixed row]

(7.30.6) Select the applications of your organization’s consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	*Select from:* ☑ Yes
Consumption of fuel for the generation of heat	*Select from:* ☑ Yes
Consumption of fuel for the generation of steam	*Select from:*

	Indicate whether your organization undertakes this fuel application
	☑ No
Consumption of fuel for the generation of cooling	*Select from:* ☑ No
Consumption of fuel for co-generation or tri-generation	*Select from:* ☑ Yes

[Fixed row]

(7.30.7) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

-

Other biomass

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

-

Other renewable fuels (e.g. renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

152427

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

-

Coal

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

-

Oil

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

5833

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

-

Gas

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

116732

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

44958

(7.30.7.8) Comment

-

Other non-renewable fuels (e.g. non-renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

104055998

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

-

Total fuel

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

104330990

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

44958

(7.30.7.8) Comment

-
[Fixed row]

(7.30.9) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

Electricity

(7.30.9.1) Total Gross generation (MWh)

16609

(7.30.9.2) Generation that is consumed by the organization (MWh)

16609

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Heat

(7.30.9.1) Total Gross generation (MWh)

16148

(7.30.9.2) Generation that is consumed by the organization (MWh)

16148

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Steam

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Cooling

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0
[Fixed row]

(7.30.14) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in 7.7.

Row 1

(7.30.14.1) Country/area

Select from:
☑ Philippines

(7.30.14.2) Sourcing method

Select from:
☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:
☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :green electricity mix

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

12668

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Philippines

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2023

(7.30.14.10) Comment

Since the green electricity sourced usually is a green energy mix from a multitude of different green sources and green energy generation facilities, that further may at least partly not be located in the country of consumption it is not possible to state one specific country of generation or one specific commissioning year in this case of mixed sourcing. Therefore as a default the country of origin is set equal to the country of consumption, since usually this is the predominant regional origin of a green energy mix consumed in one country and the commissioning year is set to match the reporting year alternatively.

Row 2

(7.30.14.1) Country/area

Select from:

☑ Ireland

(7.30.14.2) Sourcing method

Select from:

☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :green electricity mix

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

6948

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Ireland

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2023

(7.30.14.10) Comment

Since the green electricity sourced usually is a green energy mix from a multitude of different green sources and green energy generation facilities, that further may at least partly not be located in the country of consumption it is not possible to state one specific country of generation or one specific commissioning year in this case of mixed sourcing. Therefore as a default the country of origin is set equal to the country of consumption, since usually this is the predominant regional origin of a green energy mix consumed in one country and the commissioning year is set to match the reporting year alternatively.

Row 3

(7.30.14.1) Country/area

Select from:

☑ United States of America

(7.30.14.2) Sourcing method

Select from:

☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :green electricity mix

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

3174

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ United States of America

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2023

(7.30.14.10) Comment

Since the green electricity sourced usually is a green energy mix from a multitude of different green sources and green energy generation facilities, that further may at least partly not be located in the country of consumption it is not possible to state one specific country of generation or one specific commissioning year in this case of mixed sourcing. Therefore as a default the country of origin is set equal to the country of consumption, since usually this is the predominant regional origin of a green energy mix consumed in one country and the commissioning year is set to match the reporting year alternatively.

Row 4

(7.30.14.1) Country/area

Select from:

☑ Belgium

(7.30.14.2) Sourcing method

Select from:

☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :green electricity mix

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

3171

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Belgium

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2023

(7.30.14.10) Comment

Since the green electricity sourced usually is a green energy mix from a multitude of different green sources and green energy generation facilities, that further may at least partly not be located in the country of consumption it is not possible to state one specific country of generation or one specific commissioning year in this case of mixed sourcing. Therefore as a default the country of origin is set equal to the country of consumption, since usually this is the predominant regional origin of a green energy mix consumed in one country and the commissioning year is set to match the reporting year alternatively.

Row 5

(7.30.14.1) Country/area

Select from:

☑ Hungary

(7.30.14.2) Sourcing method

Select from:

☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :green electricity mix

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

1347

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Hungary

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2023

(7.30.14.10) Comment

Since the green electricity sourced usually is a green energy mix from a multitude of different green sources and green energy generation facilities, that further may at least partly not be located in the country of consumption it is not possible to state one specific country of generation or one specific commissioning year in this case of mixed sourcing. Therefore as a default the country of origin is set equal to the country of consumption, since usually this is the predominant regional origin of a green energy mix consumed in one country and the commissioning year is set to match the reporting year alternatively.

Row 6

(7.30.14.1) Country/area

Select from:

☑ Italy

(7.30.14.2) Sourcing method

Select from:

☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :green electricity mix

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

997

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Italy

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2023

(7.30.14.10) Comment

Since the green electricity sourced usually is a green energy mix from a multitude of different green sources and green energy generation facilities, that further may at least partly not be located in the country of consumption it is not possible to state one specific country of generation or one specific commissioning year in this case of mixed sourcing. Therefore as a default the country of origin is set equal to the country of consumption, since usually this is the predominant regional origin of a green energy mix consumed in one country and the commissioning year is set to match the reporting year alternatively.

Row 7

(7.30.14.1) Country/area

Select from:

☑ Germany

(7.30.14.2) Sourcing method

Select from:

☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :green electricity mix

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

518

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Germany

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2023

(7.30.14.10) Comment

Since the green electricity sourced usually is a green energy mix from a multitude of different green sources and green energy generation facilities, that further may at least partly not be located in the country of consumption it is not possible to state one specific country of generation or one specific commissioning year in this case of mixed sourcing. Therefore as a default the country of origin is set equal to the country of consumption, since usually this is the predominant regional origin of a green energy mix consumed in one country and the commissioning year is set to match the reporting year alternatively.

Row 8

(7.30.14.1) Country/area

Select from:

☑ Switzerland

(7.30.14.2) Sourcing method

Select from:

☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify **:**Wind- and Hydropower

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

3674

(7.30.14.6) Tracking instrument used

Select from:

☑ Other, please specify **:**HKN NEU100 certificates

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Switzerland

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2017

(7.30.14.10) Comment

-

Row 9

(7.30.14.1) Country/area

Select from:

☑ United Kingdom of Great Britain and Northern Ireland

(7.30.14.2) Sourcing method

Select from:

☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :green electricity mix

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

122

(7.30.14.6) Tracking instrument used

Select from:

☑ Contract

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ United Kingdom of Great Britain and Northern Ireland

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2023

(7.30.14.10) Comment

Since the green electricity sourced usually is a green energy mix from a multitude of different green sources and green energy generation facilities, that further may at least partly not be located in the country of consumption it is not possible to state one specific country of generation or one specific commissioning year in this case of mixed sourcing. Therefore as a default the country of origin is set equal to the country of consumption, since usually this is the predominant regional origin of a green energy mix consumed in one country and the commissioning year is set to match the reporting year alternatively.

Row 10

(7.30.14.1) Country/area

Select from:

☑ Singapore

(7.30.14.2) Sourcing method

Select from:

☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Solar

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

17

(7.30.14.6) Tracking instrument used

Select from:

☑ Other, please specify **:**I-REC Certificates

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Singapore

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2018

(7.30.14.10) Comment

-

Row 11

(7.30.14.1) Country/area

Select from:
☑ Germany

(7.30.14.2) Sourcing method

Select from:
☑ Retail supply contract with an electricity supplier (retail green electricity)

(7.30.14.3) Energy carrier

Select from:
☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:
☑ Small hydropower (<25 MW)

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

163294

(7.30.14.6) Tracking instrument used

Select from:

☑ Other, please specify **:**HKN Neu100 certificate of origin and approval of devaluation of certificates of origin issued by MAINOVA AG. Devaluation confirmed by German Umweltbundesamt (part of German Ministry of Environment) in their register of certificates of origin (HKNR)

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Germany

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ Yes

(7.30.14.9) Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2017

(7.30.14.10) Comment

-

[Add row]

(7.30.16) Provide a breakdown by country/area of your electricity/heat/steam/cooling consumption in the reporting year.

Albania

(7.30.16.1) Consumption of purchased electricity (MWh)

324.99

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

324.99

Angola

(7.30.16.1) Consumption of purchased electricity (MWh)

1.59

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

2

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

3.59

Argentina

(7.30.16.1) Consumption of purchased electricity (MWh)

1.9

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

1.90

Austria

(7.30.16.1) Consumption of purchased electricity (MWh)

20758.39

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

28923.63

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

49682.02

Azerbaijan

(7.30.16.1) Consumption of purchased electricity (MWh)

2.55

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

3

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

5.55

Bahrain

(7.30.16.1) Consumption of purchased electricity (MWh)

2.46

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

3

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

5.46

Belarus

(7.30.16.1) Consumption of purchased electricity (MWh)

3.4

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

4

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

7.40

Belgium

(7.30.16.1) Consumption of purchased electricity (MWh)

3173.85

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

2532

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

5705.85

Benin

(7.30.16.1) Consumption of purchased electricity (MWh)

27.83

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

27.83

Brazil

(7.30.16.1) Consumption of purchased electricity (MWh)

553.43

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

716

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

1269.43

Bulgaria

(7.30.16.1) Consumption of purchased electricity (MWh)

4715

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

4715.00

Burkina Faso

(7.30.16.1) Consumption of purchased electricity (MWh)

13.26

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

13.26

Burundi

(7.30.16.1) Consumption of purchased electricity (MWh)

11.66

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

11.66

Cameroon

(7.30.16.1) Consumption of purchased electricity (MWh)

60.13

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

60.13

China

(7.30.16.1) Consumption of purchased electricity (MWh)

6841.12

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

67

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

6908.12

Côte d'Ivoire

(7.30.16.1) Consumption of purchased electricity (MWh)

36.04

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

36.04

Croatia

(7.30.16.1) Consumption of purchased electricity (MWh)

1.27

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

2

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

3.27

Czechia

(7.30.16.1) Consumption of purchased electricity (MWh)

19.49

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

25.1

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

44.59

Democratic Republic of the Congo

(7.30.16.1) Consumption of purchased electricity (MWh)

116.06

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

116.06

Denmark

(7.30.16.1) Consumption of purchased electricity (MWh)

22.25

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

29

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

51.25

Finland

(7.30.16.1) Consumption of purchased electricity (MWh)

19.38

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

25

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

44.38

France

(7.30.16.1) Consumption of purchased electricity (MWh)

107.59

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

70

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

177.59

Gambia

(7.30.16.1) Consumption of purchased electricity (MWh)

22.94

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

22.94

Ghana

(7.30.16.1) Consumption of purchased electricity (MWh)

16.01

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

16.01

Germany

(7.30.16.1) Consumption of purchased electricity (MWh)

228304.07

(7.30.16.2) Consumption of self-generated electricity (MWh)

16608.73

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

137552.38

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

16148.12

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

398613.30

Greece

(7.30.16.1) Consumption of purchased electricity (MWh)

11.05

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

14

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

25.05

Guinea

(7.30.16.1) Consumption of purchased electricity (MWh)

3.13

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

3.13

Hong Kong SAR, China

(7.30.16.1) Consumption of purchased electricity (MWh)

55.73

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

51

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

106.73

Hungary

(7.30.16.1) Consumption of purchased electricity (MWh)

1779.08

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

2146.33

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

3925.41

India

(7.30.16.1) Consumption of purchased electricity (MWh)

52.94

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

68

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

120.94

Ireland

(7.30.16.1) Consumption of purchased electricity (MWh)

6982.06

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

44

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

7026.06

Israel

(7.30.16.1) Consumption of purchased electricity (MWh)

15.72

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

20

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

35.72

Italy

(7.30.16.1) Consumption of purchased electricity (MWh)

1478.25

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

143

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

1621.25

Japan

(7.30.16.1) Consumption of purchased electricity (MWh)

45.09

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

58

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

103.09

Kazakhstan

(7.30.16.1) Consumption of purchased electricity (MWh)

6.15

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

8

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

14.15

Kenya

(7.30.16.1) Consumption of purchased electricity (MWh)

24.23

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

31

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

55.23

Luxembourg

(7.30.16.1) Consumption of purchased electricity (MWh)

4.97

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

6

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

10.97

Malta

(7.30.16.1) Consumption of purchased electricity (MWh)

2731.16

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

5

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

2736.16

Mexico

(7.30.16.1) Consumption of purchased electricity (MWh)

291.76

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

291.76

Netherlands

(7.30.16.1) Consumption of purchased electricity (MWh)

99.62

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

97

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

196.62

Norway

(7.30.16.1) Consumption of purchased electricity (MWh)

25.25

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

32

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

57.25

Philippines

(7.30.16.1) Consumption of purchased electricity (MWh)

18107.95

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

18107.95

Poland

(7.30.16.1) Consumption of purchased electricity (MWh)

353.15

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

141.38

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

494.53

Portugal

(7.30.16.1) Consumption of purchased electricity (MWh)

7.82

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

10

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

17.82

Puerto Rico

(7.30.16.1) Consumption of purchased electricity (MWh)

3218.49

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

3218.49

Republic of Korea

(7.30.16.1) Consumption of purchased electricity (MWh)

17.09

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

22

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

39.09

Romania

(7.30.16.1) Consumption of purchased electricity (MWh)

7.22

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

9

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

16.22

Russian Federation

(7.30.16.1) Consumption of purchased electricity (MWh)

4.05

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

5

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

9.05

Rwanda

(7.30.16.1) Consumption of purchased electricity (MWh)

2.17

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

2.17

Saudi Arabi

(7.30.16.1) Consumption of purchased electricity (MWh)

7.29

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

9

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

16.29

Senegal

(7.30.16.1) Consumption of purchased electricity (MWh)

25.76

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

9

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

34.76

Singapore

(7.30.16.1) Consumption of purchased electricity (MWh)

106.31

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

86

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

192.31

Sierra Leone

(7.30.16.1) Consumption of purchased electricity (MWh)

2.2

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

2.20

Slovenia

(7.30.16.1) Consumption of purchased electricity (MWh)

3.16

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

4

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

7.16

Spain

(7.30.16.1) Consumption of purchased electricity (MWh)

61.19

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

61

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

122.19

Sweden

(7.30.16.1) Consumption of purchased electricity (MWh)

62

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

75.69

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

137.69

Switzerland

(7.30.16.1) Consumption of purchased electricity (MWh)

14041.59

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

14862.3

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

28903.89

Togo

(7.30.16.1) Consumption of purchased electricity (MWh)

22.22

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

22.22

Tunisia

(7.30.16.1) Consumption of purchased electricity (MWh)

6.44

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

8

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

14.44

Turkey

(7.30.16.1) Consumption of purchased electricity (MWh)

24.35

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

32

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

56.35

Uganda

(7.30.16.1) Consumption of purchased electricity (MWh)

25.18

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

25.18

United Arab Emirates

(7.30.16.1) Consumption of purchased electricity (MWh)

202.62

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

5

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

207.62

United Kingdom of Great Britain and Northern Ireland

(7.30.16.1) Consumption of purchased electricity (MWh)

3561.82

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

63

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

3624.82

United States of America

(7.30.16.1) Consumption of purchased electricity (MWh)

13232.07

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

6390

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

19622.07

Viet Nam

(7.30.16.1) Consumption of purchased electricity (MWh)

17.18

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

22

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

39.18
[Fixed row]

(7.36) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.

Row 1

(7.36.1) Activity

Select from:
☑ Aviation

(7.36.2) Metric figure

0.331

(7.36.3) Metric numerator

Select from:

☑ Liters of fuel

(7.36.4) Metric denominator

Select from:

☑ t.km

(7.36.5) Metric numerator: Unit total

10564258750

(7.36.6) Metric denominator: Unit total

31925000000

(7.36.7) % change from last year

-0.33

(7.36.8) Please explain

The main driver of this efficiency gain in aviation fuel consumption was the fact that the LH Group succeeded in transporting 16.4 % more passenger- and freight-kilometers in 2023 compared to 2022 (expressed by an increase of the metric denominator t.km 2023 versus previous year) whilst burning over-proportionally less aviation fuel (just 16.0 % more versus previous year), leading to a decrease of specific aviation fuel consumption per tonne kilometer of -0,33 %, i.e. an efficiency gain.
[Add row]

(7.45) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Row 1

(7.45.1) Intensity figure

0.00011

(7.45.2) Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

26912788

(7.45.3) Metric denominator

Select from:
☑ unit total revenue

(7.45.4) Metric denominator: Unit total

29926000000

(7.45.5) Scope 2 figure used

Select from:
☑ Market-based

(7.45.6) % change from previous year

0.3

(7.45.7) Direction of change

Select from:
☑ Decreased

(7.45.8) Reasons for change

Select all that apply

☑ Other emissions reduction activities

(7.45.9) Please explain

The relative increase of combined scope 1 and scope 2 emissions 2023 versus 2022 of the Lufthansa group was smaller than the relative increase of the total traffic revenues by the Lufthansa Group in 2023 versus 2022. This representing a more energy efficient operation of the Lufhansa Group's aircraft fleet.
[Add row]

(7.51) What are your primary intensity (activity-based) metrics that are appropriate to your emissions from transport activities in Scope 1, 2, and 3?

Aviation

(7.51.1) Scopes used for calculation of intensities

Select from:

☑ Report just Scope 1

(7.51.2) Intensity figure

0.00084

(7.51.3) Metric numerator: emissions in metric tons CO2e

26822114

(7.51.4) Metric denominator: unit

Select from:

☑ t.km

(7.51.5) Metric denominator: unit total

31925000000

(7.51.6) % change from previous year

-0.7

(7.51.7) Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.

No exclusion of any Scope 1 transport emissions. The intensity figure represents the LH Group's overall Scope 1 CO2-emissions divided by the overall revenue tonne kilometers transported by the LH Group's aircraft. Since 99,9 % of the overall Scope 1 emissions are resulting from aircraft fuel burnt in aircraft engines, the improvement of the emission intensity is owed to a better overall transport efficiency in 2023 compared to 2022.

ALL

(7.51.1) Scopes used for calculation of intensities

Select from:

☑ Report Scope 1 + 2

(7.51.2) Intensity figure

0.000843

(7.51.3) Metric numerator: emissions in metric tons CO2e

26912788

(7.51.4) Metric denominator: unit

Select from:

☑ t.km

(7.51.5) Metric denominator: unit total

31925000000

(7.51.6) % change from previous year

-0.9

(7.51.7) Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.

No exclusion of any Scope 1 transport emissions or Scope 2 emissions. The intensity figure represents the LH Group's overall Scope 1 plus Scope 2 CO2-emissions divided by the overall revenue tonne kilometers transported by the LH Group's aircraft. Since 99,5 % of the overall Scope 1 plus Scope 2 emissions are resulting from aircraft fuel burnt in aircraft engines, the improvement of the emission intensity is owed to a better overall transport efficiency in 2023 compared to 2022.
[Fixed row]

(7.52) Provide any additional climate-related metrics relevant to your business.

Row 1

(7.52.1) Description

Select from:
☑ Energy usage

(7.52.2) Metric value

3.01

(7.52.3) Metric numerator

MWh electricity in reporting year

(7.52.4) Metric denominator (intensity metric only)

Average number of employees in reporting year

(7.52.5) % change from previous year

19.3

(7.52.6) Direction of change

Select from:

☑ Decreased

(7.52.7) Please explain

Due to more efficient infrastructure and better utilization rate of existing infrastructure relative savings in the average consumption of electricity per employee were realized.
[Add row]

(7.53.2) Provide details of your emissions intensity targets and progress made against those targets.

Row 1

(7.53.2.1) Target reference number

Select from:

☑ Int 1

(7.53.2.2) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.53.2.3) Science Based Targets initiative official validation letter

SBTi-Urkunde.pdf

(7.53.2.4) Target ambition

Select from:

☑ Well-below 2°C aligned

(7.53.2.5) Date target was set

10/31/2021

(7.53.2.6) Target coverage

Select from:

☑ Organization-wide

(7.53.2.7) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Carbon dioxide (CO2)

☑ Perfluorocarbons (PFCs)

☑ Hydrofluorocarbons (HFCs)

☑ Nitrogen trifluoride (NF3)

☑ Sulphur hexafluoride (SF6)

(7.53.2.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 3

(7.53.2.10) Scope 3 categories

Select all that apply

☑ Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

(7.53.2.11) Intensity metric

Select from:

☑ Other, please specify :Gramm CO2e per revenue tonne kilometer (g CO2e / RTK)

(7.53.2.12) End date of base year

12/30/2019

(7.53.2.13) Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)

0.000826815

(7.53.2.17) Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)

0.000210462

(7.53.2.32) Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)

0.0002104620

(7.53.2.33) Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

0.0010372770

(7.53.2.34) % of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

98.57

(7.53.2.38) % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure

99.01

(7.53.2.53) % of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure

58.74

(7.53.2.54) % of total base year emissions in all selected Scopes covered by this intensity figure

88.23

(7.53.2.55) End date of target

12/30/2030

(7.53.2.56) Targeted reduction from base year (%)

30.6

(7.53.2.57) Intensity figure at end date of target for all selected Scopes (metric tons CO2e per unit of activity)

0.0007198702

(7.53.2.58) % change anticipated in absolute Scope 1+2 emissions

-15.92

(7.53.2.59) % change anticipated in absolute Scope 3 emissions

-9.44

(7.53.2.60) Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

0.0008056866

(7.53.2.64) Intensity figure in reporting year for Scope 3, Category 3: Fuel- and energy-related activities (metric tons CO2e per unit of activity)

0.0002050839

(7.53.2.79) Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)

0.0002050839

(7.53.2.80) Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

0.0010107705

(7.53.2.81) Land-related emissions covered by target

Select from:

☑ Yes, it covers land-related emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

(7.53.2.82) % of target achieved relative to base year

8.35

(7.53.2.83) Target status in reporting year

Select from:

☑ Underway

(7.53.2.85) Explain target coverage and identify any exclusions

*This target is organization-wide and covers 88 % of both our Scope 1 and 3 emissions in 2019. Lufthansa Group commits to reduce its GHG emissions from the combustion of jet fuel (Scope 1 Scope 3 Category 3 as per SBTi target template, WTW approach) by 30,60% per Revenue Tonne Kilometer (RTK) by 2030 from a 2019 base year. This intensity target relates to the combustion of jet fuel only (as per SBTi target template 1.037 g CO_2e/RTK, absolute 39.655.275 t CO_2e in 2019, Well-to-wheel (WTW) approach), other sources of emissions are not included (e.g. natural gas in stationary installations). The target boundary includes land-related emissions and removals from bioenergy feedstocks. Note: The intensity figures are calculated energetic acc. to SBTi Aviation Tool (Tank-to-wheel (TTW) WTW * 71,5 / 89,7). This target is part of LHG long term net-zero target 2050.*

(7.53.2.86) Target objective

The SBTi target aligns with LHG's broader strategy through several strategic objectives: Enhancing Sustainability and Reputation Objective: The SBTI target demonstrates LHG's commitment to sustainability and climate action, enhancing credibility and reputation among stakeholders. Link to strategy: A holistic ESG focus is anchored in LHG's corporate strategy. Driving Innovation and Operational Efficiency Objective: Encourages investment in technologies and processes to reduce emissions, improving efficiency and reducing costs. Link to Strategy: Supports operational strategy by promoting innovation, optimizing resources, and enhancing productivity. Strengthening Investor Relations and Access to Capital Objective: Attracts ESG-focused investors and improves access to capital. Link to Strategy: Enhances financial strategy, potentially leading to better financing terms. Aligning with Customer Expectations and Market Demands Objective: LHGs customers, especially in B2B contexts, are increasingly expecting suppliers to demonstrate strong environmental performance. Setting SBTi targets helps LHG to meet these expectations. Link to Strategy: Aligns with sales and customer relationship strategies, potentially increasing market share and customer loyalty. Contributing to Global Climate Goals Objective: By aligning with the Paris Agreement's goal LHG can play a direct role in global climate action. Link to Strategy: Target contributes to LHG's CSR strategy.

(7.53.2.87) Plan for achieving target, and progress made to the end of the reporting year

There are three big levers to achieve the target: 1. Fleet renewal: LHG invests continuously in modern, fuel-efficient aircraft and engine technologies, which represent the most important element in reducing CO_2 emissions from flight operations. At the end of 2023, the Lufthansa Group ordered a total of 80 ultra modern short- and medium-haul aircraft. These were 40 Airbus A220-300s and 40 Boeing 737-8 MAXs. Purchase options were also agreed for another 20 A220-300s, 60 B737-8 MAXs and 40 aircraft from the A320neo family. Measures to technically modify the existing fleet are also constantly examined and implemented where appropriate. By mid 2020, a new surface coating developed jointly by Lufthansa Technik and BASF Coatings GmbH were tested. This functional film, known as AeroSHARK, optimizes the aerodynamics and saves 1% CO_2 per flight. By the end of 2023, 15 Boeing 777 aircraft at Lufthansa Cargo and SWISS had been equipped with this new type of surface. We are also continuously expanding our range of offers and services for more sustainable travel. 2. Operational & air traffic management efficiency: LHG's operational measures for CO2 reduction comprise the use of efficiently sized aircraft and the optimisation of load factors, as well as reviewing and introducing new flight procedures and navigation technologies, determining optimal routes and speeds, and monitoring the many activities to save fuel. In the year 2023, 67 fuel-saving projects were under way across LHG. They enabled another 25,100 tonnes of CO_2 emissions to be permanently eliminated in the reporting year. 3. Sustainable Aviation Fuel (SAF): SAF shows an up to 90% fossil CO_2 mitigation in comparison to fossil fuel. In 2023, Lufthansa German Airlines signed a letter of intent for a research partnership with the German Aerospace Center, Munich Airport, Airbus and MTU for operational testing of every aspect of PtL use in daily flight operations. This includes a wide range of questions relating to the use of SAF, such as the use of pure (100%) PtL fuel and the effect of SAF on the formation of contrails. The use of the SAF reduced the LHG's CO_2 emissions with an impact on the climate by a total of 43,628 tonnes in 2023.

(7.53.2.88) Target derived using a sectoral decarbonization approach

Select from:

☑ No

[Add row]

(7.54.3) Provide details of your net-zero target(s).

Row 1

(7.54.3.1) Target reference number

Select from:

☑ NZ1

(7.54.3.2) Date target was set

01/11/2020

(7.54.3.3) Target Coverage

Select from:

☑ Organization-wide

(7.54.3.4) Targets linked to this net zero target

Select all that apply

☑ Int1

(7.54.3.5) End date of target for achieving net zero

12/30/2050

(7.54.3.6) Is this a science-based target?

Select from:

☑ Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

(7.54.3.8) Scopes

Select all that apply

☑ Scope 1

(7.54.3.9) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)
☑ Nitrous oxide (N2O)
☑ Carbon dioxide (CO2)
☑ Perfluorocarbons (PFCs)
☑ Hydrofluorocarbons (HFCs)
☑ Sulphur hexafluoride (SF6)
☑ Nitrogen trifluoride (NF3)

(7.54.3.10) Explain target coverage and identify any exclusions

LHG is committed to a net zero target by 2050 covering its scope 1 emissions. This target is a net emissions target, whereby the majority of the emissions reduction is to be achieved through a combination of measures within the LHG - new aircrafts, operational improvements, zero-emission aircraft, SAF. This requires appropriate political support and further co-operation with other stakeholders to accelerate the reduction of emissions in the sector. It is expected that SAF will become the most important mitigation option in the future. Against this background, LHG fosters SAF innovation through a global network of partnerships with SAF developers and suppliers, e.g. solar fuels (Synhelion partnership) to increase the number of technologies and suppliers on the market. Electric/hydrogen aircraft may also play a role after 2035. The LHG aims to neutralise all remaining emissions that cannot be reduced within the LHG by 2050. In the short to medium term, this will be achieved through the use of carbon offsets, starting with structured, market-based systems such as the EU Emissions Trading Scheme and CORSIA, which ensure high quality. As carbon capture technologies evolve, the LHG intends to increase their use, with the aim of relying on them fully to offset remaining emissions by 2050. The faster the development of low-carbon aircraft and sustainable fuels can take place, the more emissions reductions can achieved in-sector.

(7.54.3.11) Target objective

The LHG's 2050 net-zero target complements the LHG's SBTi validated intensity target. It is intended to emphasise the LHG's long-term commitment and is in line with the Paris Agreement, which is supported by the LHG. Pursuing the net-zero target also helps LHG to proactively prepare for the increasing regulatory requirements to achieve carbon neutrality and minimise legal risks. In addition, such a goal supports the implementation of measures that help to mitigate the increasing climate-related risks by preparing the company for a low-carbon future.

(7.54.3.12) Do you intend to neutralize any residual emissions with permanent carbon removals at the end of the target?

Select from:

☑ Yes

(7.54.3.13) Do you plan to mitigate emissions beyond your value chain?

Select from:

☑ No, we do not plan to mitigate emissions beyond our value chain

(7.54.3.14) Do you intend to purchase and cancel carbon credits for neutralization and/or beyond value chain mitigation?

Select all that apply

☑ Yes, we are currently purchasing and cancelling carbon credits for beyond value chain mitigation

(7.54.3.17) Target status in reporting year

Select from:

☑ Underway

[Add row]

(7.55.1) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	*839*	*`Numeric input*
To be implemented	*205*	*95858.6*
Implementation commenced	*124*	*82924.07*
Implemented	*10*	*3491.78*
Not to be implemented	*369*	*`Numeric input*

[Fixed row]

(7.55.2) Provide details on the initiatives implemented in the reporting year in the table below.

Row 1

(7.55.2.1) Initiative category & Initiative type

Transportation

☑ Company fleet vehicle efficiency

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

1898.82

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

482000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:

☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

Implementation of AIP-Planning-Distances for Arrivals in MUC (Project @ Lufthansa German Airlines)

Row 2

(7.55.2.1) Initiative category & Initiative type

Transportation

☑ Company fleet vehicle efficiency

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

583.7

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

148000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:
☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:
☑ Ongoing

(7.55.2.9) Comment

Project at Austrian Airlines: Installation of new lighter Premium Economy Class on the Boeing 767 fleet leads to CO2 savings.

Row 3

(7.55.2.1) Initiative category & Initiative type

Transportation
☑ Company fleet vehicle efficiency

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

504

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply
☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

128000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:

☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

Project at Air Dolomiti: a seat configuration update for Air Dolomiti aircraft leads to CO2 savings.

Row 4

(7.55.2.1) Initiative category & Initiative type

Transportation

☑ Company fleet vehicle efficiency

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

232.16

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

59000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:

☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

Project at Cityline: Implementation of AIP-Planning-Distances for Arrivals at Munich Airport. Adjustment of the arrival distances in the operational flight plan leads to CO2 savings during the approach.

Row 5

(7.55.2.1) Initiative category & Initiative type

Transportation

☑ Company fleet vehicle efficiency

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

98.28

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

25000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:

☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

Project at Air Dolomiti: Implementation of AIP-Planning-Distances for Arrivals at Munich Airport. Adjustment of the arrival distances in the operational flight plan leads to CO2 savings during the approach.

Row 6

(7.55.2.1) Initiative category & Initiative type

Transportation

☑ Company fleet vehicle efficiency

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

95.13

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

24000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:
☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:
☑ Ongoing

(7.55.2.9) Comment

Project at Swiss: a new contract for light-weight tires on the Boeing 777-fleet was signed in 2023. Lighter tires lead to CO2 savings.

Row 7

(7.55.2.1) Initiative category & Initiative type

Transportation
☑ Company fleet vehicle efficiency

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

52.92

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply
☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

13500

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:

☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

Project at Eurowings: Implementation of AIP-Planning-Distances for Arrivals at Munich Airport. Adjustment of the arrival distances in the operational flight plan leads to CO2 savings during the approach.

Row 8

(7.55.2.1) Initiative category & Initiative type

Transportation

☑ Company fleet vehicle efficiency

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

12.6

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

3000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:

☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

Project at Austrian Airlines: Implementation of AIP-Planning-Distances for Arrivals at Munich Airport. Adjustment of the arrival distances in the operational flight plan leads to CO2 savings during the approach.

Row 9

(7.55.2.1) Initiative category & Initiative type

Transportation

☑ Company fleet vehicle efficiency

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

10.4

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

2500

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:

☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

Project at Brussels Airlines: Implementation of AIP-Planning-Distances for Arrivals at Munich Airport. Adjustment of the arrival distances in the operational flight plan leads to CO2 savings during the approach.

Row 10

(7.55.2.1) Initiative category & Initiative type

Transportation

☑ Company fleet vehicle efficiency

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

3.78

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

1000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:

☑ <1 year

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

Project at Swiss Airlines: Implementation of AIP-Planning-Distances for Arrivals at Munich Airport. Adjustment of the arrival distances in the operational flight plan leads to CO2 savings during the approach.
[Add row]

(7.55.3) What methods do you use to drive investment in emissions reduction activities?

Row 1

(7.55.3.1) Method

Select from:

☑ Financial optimization calculations

(7.55.3.2) Comment

The LHG uses an internal carbon price (price range), which is mainly used by environmental-, strategy-, risk controlling-, sales-, fuel- and aircraft procurement-teams, this typically by taking into account the costs of current and (possible) future regulations (e.g. EU ETS, CORSIA). This means that the CO_2 price risk is increasingly taken into account in investment- or project-decisions. The risk controlling department prepares monthly reports on the current and forecast development of the CO_2 market price and calculates the potential cost impact on the LHG. The LHG is also active in the voluntary carbon market and purchases project-based carbon credits for its corporate and private customer carbon offsetting program. A calculated internal CO_2 price is used for this voluntary offer. As part of its green electricity target LHG is also purchasing green energy certificates (scope 2). Therefore LHG calculate an 'implicit carbon price' for carbon free electricity supply.

[Add row]

(7.73.2) Complete the following table for the goods/services for which you want to provide data.

Row 1

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 2

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality

product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 3

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 4

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 5

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 6

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 7

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 8

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 9

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity

investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 10

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 11

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 12

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 13

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 14

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 15

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 16

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity

investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 17

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 18

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 19

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 20

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 21

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 22

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 23

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity

investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 24

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 25

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

Row 26

(7.73.2.1) Requesting member

Select from:

(7.73.2.2) Name of good/ service

Air transport of passengers / cargo not stockable

(7.73.2.3) Description of good/ service

The Passenger Airlines segment comprises Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines and Brussels Airlines – which offer their customers a premium experience, with high-quality products and services – as well as Eurowings, which is positioned as a value carrier with an exclusive focus on point-to-point traffic. With their multi-hub strategy, the Passenger Airlines offer their passengers a premium, high-quality product and service, with the multi-hub strategy which includes the hubs of Frankfurt, Munich, Vienna, Zurich, Brussels and a comprehensive route network with an outstanding degree of travel flexibility. The Eurowings business segment includes the flight operations of Eurowings and Eurowings Europe, as well as the equity investment in SunExpress. Eurowings is positioned as Europe's value carrier for private and business travel, with a focus on European point-to-point traffic, enabling its customers low-cost and flexible flying with innovative services.

(7.73.2.4) Type of product

Select from:

☑ Final

(7.73.2.5) Unique product identifier

Air transport of passengers / cargo not stockable

(7.73.2.6) Total emissions in kg CO2e per unit

0.83

(7.73.2.7) ±% change from previous figure supplied

-0.3

(7.73.2.8) Date of previous figure supplied

12/30/2022

(7.73.2.9) Explanation of change

The reduction in specific emissions in the Group fleet compared with the previous year was mainly due to an increase in the passenger load factor, changes in the route network, that resulted in a structural increase in average flight length. Longer routes typically create lower specific emissions because the emissions from take-offs and landings, which are higher than in-flight emissions, become less significant in overall terms as the flight distance increases.

(7.73.2.10) Methods used to estimate lifecycle emissions

Select from:

☑ GHG Protocol Product Accounting & Reporting Standard

[Add row]

(7.73.3) Complete the following table with data for lifecycle stages of your goods and/or services.

Row 1

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 2

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 3

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 4

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 5

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:
☑ Yes

(7.73.3.7) Type of data used

Select from:
☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 6

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 7

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 8

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:
☑ Yes

(7.73.3.7) Type of data used

Select from:
☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 9

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 10

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:
☑ Yes

(7.73.3.7) Type of data used

Select from:
☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 11

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:
☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 12

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 13

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 14

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:
☑ Yes

(7.73.3.7) Type of data used

Select from:
☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 15

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:
☑ Yes

(7.73.3.7) Type of data used

Select from:
☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 16

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:
☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 17

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 18

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 19

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 20

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 21

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:
☑ Yes

(7.73.3.7) Type of data used

Select from:
☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 22

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:
☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 23

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 24

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:
☑ Yes

(7.73.3.7) Type of data used

Select from:
☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 25

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:

☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:

☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:

☑ Yes

(7.73.3.7) Type of data used

Select from:

☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3

Row 26

(7.73.3.1) Requesting member

Select from:

(7.73.3.2) Name of good/ service

Passenger and freight transport by aircraft and associated ground operations and supply chain processes

(7.73.3.3) Scope

Select from:
☑ Scope 1, 2 & 3

(7.73.3.4) Lifecycle stage

Select from:
☑ Transportation

(7.73.3.5) Emissions at the lifecycle stage in kg CO2e per unit

1.08

(7.73.3.6) Lifecycle stage under your ownership or control

Select from:
☑ Yes

(7.73.3.7) Type of data used

Select from:
☑ Primary and secondary

(7.73.3.8) Data quality

Scope 1 reasonable assurance, Scope 2 and 3 limited assurance

(7.73.3.9) If applicable, describe the verification/assurance of the product emissions data

verification standard of CO2 emissions data: ISO 14064-3
[Add row]

(7.73.4) Please detail emissions reduction initiatives completed or planned for this product.

Row 1

(7.73.4.1) Name of good/ service

Passenger and freight transportation by aircraft

(7.73.4.2) Initiative ID

Select from:
☑ Initiative 1

(7.73.4.3) Description of initiative

The Lufthansa Group has always contributed to the progress of the aviation industry and connects people, cultures and economies. Responsible action is the basis of our entrepreneurial activities. We want to continuously reduce the impact of flying on the climate and the environment. To this end, we have set ourselves ambitious targets: By 2030: Halve net CO_2 emissions compared to 2019 By 2050: CO_2 neutrality (net zero CO_2 emissions) Through reduction and compensation measures the company aims to achieve a neutral CO_2 balance by 2050. Already by 2030, the Lufthansa Group wants to halve its net CO_2 emissions compared to 2019 through reduction and compensation measures. Our CO_2 reduction target - scientifically based: Since August 2022, the reduction path to achieve the Lufthansa Group's 2030 climate protection target has been validated by the Science Based Targets Initiative (SBTi). This means that our CO_2 emissions will be reduced by -30.6% g/RTK (g CO2eq/Revenue Ton Kilometre) compared to 2019. This brings our reduction path in line with the target of the 2015 Paris Climate Agreement.

(7.73.4.4) Completed or planned

Select from:
☑ Ongoing

(7.73.4.5) Emission reductions in kg CO2e per unit

0.83
[Add row]

(7.74.1) Provide details of your products and/or services that you classify as low-carbon products.

Row 1

(7.74.1.1) Level of aggregation

Select from:
☑ Product or service

(7.74.1.2) Taxonomy used to classify product(s) or service(s) as low-carbon

Select from:
☑ No taxonomy used to classify product(s) or service(s) as low carbon

(7.74.1.3) Type of product(s) or service(s)

Biofuels
☑ Other, please specify **:**Sustainable Aviation Fuel (SAF)

(7.74.1.4) Description of product(s) or service(s)

LHG has already implemented a broad spectrum of products for low carbon flying - along the travel journey for the private customers, on bulk and on route for corporates product. These products includes both the opportunity to reduce emissions directly by purchasing sustainable aviation fuel (SAF), and to offset them via climate protection projects. LHG was the first airline to sell certified emission reductions for SAF. The amount of SAF purchased for this purpose must meet contractually agreed sustainability criteria. The scheme is based on the EU Renewable Energy Directive (2018/2001). Additional criteria have also been defined, for instance, that SAF is free of palm oil, and is purchased in addition to mandatory quotas and is not included in the EU ETS. Double counts are also ruled out. Since 2022 the opportunity to buy this low-carbon service when booking a flight is implemented at all LHG passenger airlines. In addition, new Green Fare by using SAF and carbon offsetting projects, was introduced in 2023. In the future, SAF will be made as well by using renewable energies (Power to liquid, PtL) and the power of the sun (Sun to liquid, StL). The LHG airlines are the first customer for the world's first PtL jet fuel made on an industrial scale as well as for the first solar fuel (StL).

(7.74.1.5) Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Select from:

☑ Yes

(7.74.1.6) Methodology used to calculate avoided emissions

Select from:

☑ Other, please specify **:**SAF CO2 savings vs. fossil fuel

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Cradle-to-grave

(7.74.1.8) Functional unit used

Using SAF in the LHG fleet vs. operating this fleet by fossil jet fuel only.

(7.74.1.9) Reference product/service or baseline scenario used

up to minus 90 % carbon emissions compared to fossil fuel thanks to sustainable fuel of biogenic origins – including production and transport (Well-to-Wheel Accounting). The Emission Mitigation Certificate (EMC) for corporate customers guarantees min. 80% emission mitigation (compared to fossil reference, which is jet fuel in this case) and calculates with WTW emission factor (max. 17,46 g CO_2e/MJ).

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:

☑ Cradle-to-grave

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

43628

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

The use of the Sustainable Aviation Fuel (SAF) reduced the Lufthansa Group's CO_2emissions with an impact on the climate by a total of 43,628 tonnes in 2023 (Well-to-Wheel Accounting). Every purchased SAF amount has an own Proof of Sustainability (PoS) certificate with individual emission factor. In aggregate, LHG calculates with this assumption: CO_2 emission of SAF is equal to 1/10 of fossil jet fuel (10% CO_2 emissions of SAF to take account of SAF production and transport acc. to cradle-to-grave approach), 90% CO_2 saving of SAF per unit.

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.07
[Add row]

(7.75) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Row 1

(7.75.1) Activity

Select from:
☑ Aviation

(7.75.2) Metric

Select from:
☑ Fleet adoption

(7.75.3) Technology

Select from:
☑ Other, please specify **:**Increase of the share of low carbon company cars in reporting year 2023 compared to year 2022.

(7.75.4) Metric figure

13

(7.75.5) Metric unit

Select from:

☑ Other, please specify **:**Percentage points

(7.75.6) Explanation

By incentivizing the use of low carbon company cars in Germany, the share of these cars in the LH Group's company car fleet in Germany was increased by 13 percentage points from 45% in 2022 to 58% in 2023. This represents an increase of the electric and hybrid company car fleet of 36% in 2023 compared to 2022. [Add row]

(7.79.1) Provide details of the project-based carbon credits canceled by your organization in the reporting year.

Row 1

(7.79.1.1) Project type

Select from:

☑ Solar

(7.79.1.2) Type of mitigation activity

Select from:

☑ Emissions reduction

(7.79.1.3) Project description

In order to reduce CO_2 and counter the rapid deforestation on Madagascar, the project supports the manufacture and distribution of efficient cookers and climate-friendly solar cookers. The sensibilisation of pupils about environmental protection and climate friendly cooking as well as the reforestation of two seedlings per cook stove sold are part of that project.

(7.79.1.4) Credits canceled by your organization from this project in the reporting year (metric tons CO2e)

24676

(7.79.1.5) Purpose of cancelation

Select from:

☑ Voluntary offsetting

(7.79.1.6) Are you able to report the vintage of the credits at cancelation?

Select from:

☑ Yes

(7.79.1.7) Vintage of credits at cancelation

2021

(7.79.1.8) Were these credits issued to or purchased by your organization?

Select from:

☑ Purchased

(7.79.1.9) Carbon-crediting program by which the credits were issued

Select from:

☑ Gold Standard

(7.79.1.10) Method the program uses to assess additionality for this project

Select all that apply

☑ Barrier analysis

(7.79.1.11) Approaches by which the selected program requires this project to address reversal risk

Select all that apply

☑ No risk of reversal

(7.79.1.12) Potential sources of leakage the selected program requires this project to have assessed

Select all that apply

☑ Activity-shifting

☑ Market leakage

☑ Ecological leakage

(7.79.1.13) Provide details of other issues the selected program requires projects to address

no other issue

(7.79.1.14) Please explain

According to Gold Standard method requirements, following leakage risks have been assessed: Displaced technologies are used again outside of boundary, saved biomass is used by other non-project users, impact on other carbon/forestry projects, compensation of less space heating with other technology, substitution of lower-emission technologies.
[Add row]

C11. Environmental performance - Biodiversity

(11.3) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?
	Select from: ☑ No

[Fixed row]

C13. Further information & sign off

(13.1) Indicate if any environmental information included in your CDP response (not already reported in 7.9.1/2/3, 8.9.1/2/3/4, and 9.3.2) is verified and/or assured by a third party?

	Other environmental information included in your CDP response is verified and/or assured by a third party
	Select from: ☑ Yes

[Fixed row]

(13.1.1) Which data points within your CDP response are verified and/or assured by a third party, and which standards were used?

Row 1

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Climate change

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Climate change

☑ Emissions breakdown by business division

(13.1.1.3) Verification/assurance standard

Climate change-related standards

☑ ISO 14064-3

(13.1.1.4) Further details of the third-party verification/assurance process

LHG has chosen to verify the selected data points with the mentioned standard in order to provide verified data to our interested stakeholders. All data mentioned in chapter 7.23 was verified by third party.

(13.1.1.5) Attach verification/assurance evidence/report (optional)

LH Group opinion statement AND verification statement.pdf

Row 2

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Climate change

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Climate change

☑ Emissions breakdown by country/area

(13.1.1.3) Verification/assurance standard

Climate change-related standards

☑ ISO 14064-3

(13.1.1.4) Further details of the third-party verification/assurance process

LHG has chosen to verify the selected data points with the mentioned standard in order to provide verified data to our interested stakeholders. All data mentioned in chapter 7.16 was verified by third party.

(13.1.1.5) Attach verification/assurance evidence/report (optional)

LH Group opinion statement AND verification statement.pdf

Row 3

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Climate change

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Climate change

☑ Renewable fuel consumption

(13.1.1.3) Verification/assurance standard

Climate change-related standards

☑ ISO 14064-3

(13.1.1.4) Further details of the third-party verification/assurance process

LHG has chosen to verify the selected data points with the mentioned standard in order to provide verified data to our interested stakeholders. All data mentioned in chapter 7.30 was verified by third party.

(13.1.1.5) Attach verification/assurance evidence/report (optional)

LH Group opinion statement AND verification statement.pdf

Row 4

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Climate change

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Climate change

☑ Electricity/Steam/Heat/Cooling consumption

(13.1.1.3) Verification/assurance standard

Climate change-related standards

☑ ISO 14064-3

(13.1.1.4) Further details of the third-party verification/assurance process

LHG has chosen to verify the selected data points with the mentioned standard in order to provide verified data to our interested stakeholders. All data mentioned in chapter 7.30 was verified by third party.

(13.1.1.5) Attach verification/assurance evidence/report (optional)

LH Group opinion statement AND verification statement.pdf
[Add row]

(13.3) Provide the following information for the person that has signed off (approved) your CDP response.

(13.3.1) Job title

Senior Director Sustainability, Head of ESG Rating and Reporting

(13.3.2) Corresponding job category

Select from:

☑ Business unit manager

[Fixed row]

(13.4) External verification statement of scope 1, 2 and 3 emissions

verified by

MÜLLER-BBM CERT GMBH

GHG-Protocol

VERIFICATION STATEMENT

Müller-BBM Cert Umweltgutachter GmbH, approved verification body for aviation activities, confirms that CO_2 emissions data and energy consumption in the submitted Climate Change Questionnaire 2024 Chapter C7* in the reporting year 2023 of

LUFTHANSA GROUP

Deutschen Lufthansa AG and affiliates**

audited according to the requirements of ISO 14064-3 are reviewed and verified with the following uncertainties:

Scope 1 total (reasonable assurance, 2% materiality)	26,822,114 t CO_{2eq}
Scope 1 fossil (reasonable assurance, 2% materiality)	26,782,919 t CO_{2eq}
Scope 1 biogenic**** (reasonable assurance, 2% materiality)	39,195 t CO_{2eq}
Scope 2*** (limited assurance, 5% materiality)	90,673 t CO_{2eq}
Scope 3***** (limited assurance, 10% materiality)	10,062,778 t CO_{2eq}

Kerpen, September 23rd, 2024

Müller-BBM Cert Umweltgutachter GmbH

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* Verification of questions: C.7.4, C.7.9.1, C.7.9.2, C.7.9.3, C.7.16, C.7.17.3, C.7.19, C.7.20.3, C.7.21, C.7.23, C.7.29, C.7.30, C.7.30.1, C.7.30.7, C.7.30.9, C.7.30.14, C.7.30.16

** Companies in the scope:
Deutsche Lufthansa AG, Lufthansa Cargo AG, Lufthansa Technik AG, Lufthansa CityLine GmbH, Swiss International Air Lines AG, Edelweiss Air AG, Brussels Airlines SA/NV, Austrian Airlines AG, Air Dolomiti S.p.A. Linee Aeree Regionali Europee, Germanwings GmbH, Eurowings Aviation GmbH, Eurowings Europe Limited, Eurowings Discover GmbH, Eurowings Europe GmbH, Lufthansa City Airlines, Lufthansa AirPlus Servicekarten GmbH, Lufthansa Group Business Services GmbH, Lufthansa Seeheim GmbH, Miles & More GmbH, Lufthansa Process Management GmbH, Lufthansa Systems GmbH & Co.KG, Lufthansa Industry Solutions GmbH & Co.KG, Lufthansa Aviation Training GmbH, LZ-Catering GmbH, Lufthansa Global Tele Sales GmbH, EFM Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München GmbH, additional proportionate share of joint ventures AeroLogic GmbH, SunExpress (Günes Ekspres Havacilik A.S.), N3 Engine Overhaul Services GmbH & Co. KG and EME Aero.

*** market based

**** Note: These biogenic CO_{2eq} emissions reflect reduced fossil CO_{2eq} emissions in Scope 1 from use of certified biogenic sustainable aviation fuel. These reductions were realized for defined customers of LHG (incl. customers on codeshare flights of associated LHG partners) and exclusively allocated to them. They shall therefore not be claimed regularly and in principle by all LHG customers.

***** Includes changes of emissions from purchased fuels due to switch from fossil fuel to sustainable aviation fuel.

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verified by

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GHG-Protocol

VERIFICATION STATEMENT

Appendix to verification statement dated 23rd of September 2024

Category	Content	t CO_{2eq}
Scope 1		26,822,114
of which fossil origin		26,782,919
of which biogenic origin (SAF)		39,195
Scope 2	market based	90,673
Scope 3		
Purchased Goods and Services	Purchased flight simulators	9,465
Capital goods	Emissions from the manufacture of aircraft and turbines	368,744
Fuel- and Energy-Related Activities Not Included in Scope 1 and 2	A. Upstream emissions of purchased fuels	5,948,321
	B. Upstream emissions of purchased electricity	38,357
	C. transmission and distribution (T&D) losses	8,200
	D. Generation of purchased electricity that is sold to end users	not relevant
Upstream Transportation and Distribution	Third parties	774,291
	RFS-Cargo	21,487
	ICE-AirRail	10,602
	Airport Operation	316,360
Waste Generated in Operations		3,446
Business Travel	Crew Accommodation	40,719
Employee Commuting		54,890
Upstream Leased Assets (Not included in Scope 1 or 2)		1,282
Downstream Transportation and Distribution		525
Processing of Sold Products		not relevant
Use of Sold Products		not relevant
End-of-Life Treatment of Sold Products		not relevant
Downstream Leased Assets (Not Included in Scope 1 or 2)		501,813
Franchises (Not included in Scope 1 or 2)		not relevant
Investments (Not Included in Scope 1 or 2)		1,964,275

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